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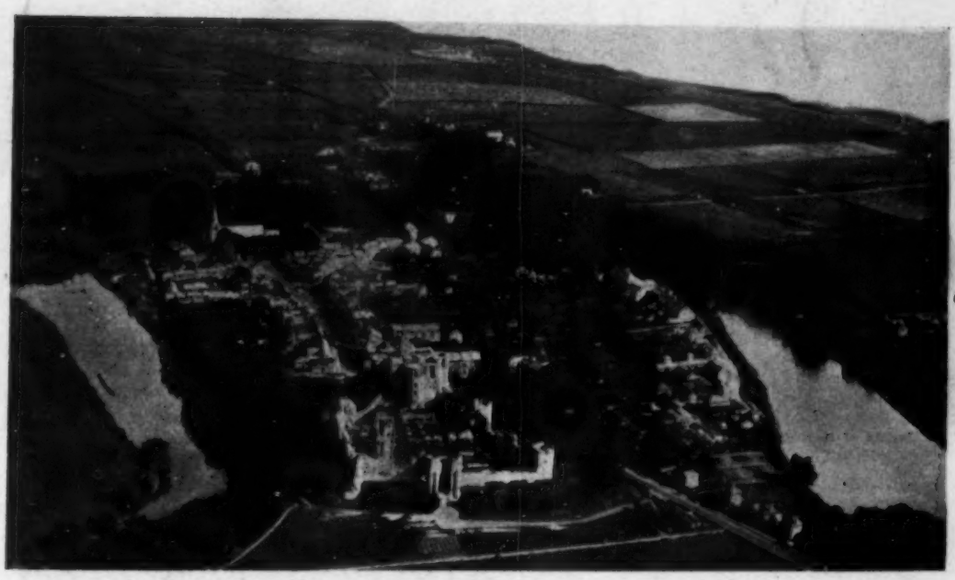


Warkworth, Northumberland: Bird's-eye View, showing Castle.

(*See page* 298.)

MEETINGS

FRIDAY, *February* 7.

Institute of Fuel. Professor M. W. Travers on "Fundamental Problems of Flue Gas Purification." At the Engineers' Club, Manchester. 7 p.m.

Institution of Municipal and County Engineers. Institution Meeting. Also Visit to Ford Motor Works. At Dagenham. 10.30 a.m.

SATURDAY, *February* 8.

Architectural Association. Mr. G. G. Wornum on "Decoration and Furnishing." 3 p.m.

MONDAY, *February* 10.

Surveyors' Institution. Mr. J. Logie Milne on "The Rating and Valuation (Apportionment) Act, 1928." 8 p.m.

Institution of Heating and Ventilating Engineers. Mr. B. T. Wingfield on "Automatic Control in Heating and Air Conditioning Installations." At the Borough Polytechnic, S.E.1. 7 p.m.

TUESDAY, *February* 11.

Incorporated Institute of British Decorators. Mr. T. E. Scott on "The Training and Work of the Decorator." At Carpenters' Hall, E.C.2. 8 p.m.

Institution of Electrical Engineers (East Midlands Sub-Centre). Mr. G. R. J. Parkinson on "Electrical Development." At the College, Loughborough. 6.45 p.m.

Provident Institution of Builders' Foremen and Clerks of Works. Annual Dinner. At the Hotel Victoria. 7 p.m.

Institution of Civil Engineers. Discussion on "The Diversion of the River Ashop," by Mr. R. W. Scott Thompson. 6 p.m.

Institution of Electrical Engineers (Scottish Centre). Mr. W. B. Hird on "The Visit of the Institution to France." At the Royal Technical College, Glasgow. 7.30 p.m.

WEDNESDAY, *February* 12.

L.C.C. Central School of Arts and Crafts. Sir Banister Fletcher, P.R.I.B.A., on "Roman Architecture." 6 p.m.

Institution of Civil Engineers. Discussion on "The Influence of the Progress of Aeronautical Engineering on other Branches of Engineering Work," by Mr. Lucien Alphonse Legros. 6 p.m.

Institution of Electrical Engineers (Scottish Centre). Mr. W. B. Woodhouse on "Overhead Electric Lines." At Glasgow.

THURSDAY, *February* 13.

Victoria and Albert Museum. Professor A. M. Hind on "Early Italian Engravings." 5.30 p.m.

Institution of Structural Engineers. Major J. Caldwell on "Welding." 6.30 p.m.

Chadwick Public Lecture. Professor B. Blacklock on "Health in West Africa." At the Medical Society of London, 11, Chandos-street, W.1. 5.15 p.m.

West Yorkshire Society of Architects. Mr. W. M. Keesey on "Print Making and Collecting." At Leeds. 7 p.m.

Institute of Arbitrators. Mr. W. E. Watson on "Legal Interpretation in Contract." 4 p.m.

FRIDAY, *February* 14.

Town Planning Institute. Mr. H. V. Lanchester on "The Systematic Treatment of Road Signs." 6 p.m.

Institution of Structural Engineers (Midland Counties Branch). Discussion on "Bracing for Wind and Vibratory Forces," opened by Mr. W. Smith. At Birmingham. 6.30 p.m.

Institution of Mechanical Engineers. Informal Meeting. 7 p.m.

WEDNESDAY TO SATURDAY, *February* 12-15.

Electrical Development Association. Practical Course on Home Electrification for Women. 15, Savoy-street, Strand, W.C.2.

Exhibited at the Society of Scottish Artists' Exhibition, 1929-30.

From a Water-colour drawing by Mr. William Davidson, F.R.I.B.A.

From a Photograph.

Warkworth Castle, Northumberland: South Front.

(*See page* 298.)

THE STATE AND INDUSTRY

WE publish on another page in this issue an article describing a fresh development in technical education for the building trade. In it we are informed that the Board of Education and the Institute of Builders are to be associated for the purpose of awarding National Certificates and Diplomas in general Building Technology. We regard the step as of sufficiently general interest and concern to merit special consideration.

There are many directions in which this development might touch the interests of our readers. If, for instance, it could be proved that this was to provide the acid test by which the competence of the builder of the future could be measured, an inviting prospect would be opened up. Instead of, as now, seeking the doubtful opinion of friends and acquaintances and professional confrères as to the ability of the builder we have considered employing, we should have but to ask for his certificate. and accept it as proof enough, or its absence as an adverse verdict. And like all easy things, that would be too easy to be true; for from experience of many qualifications and diplomas, in many walks of life, we know that it is by their works we shall know men, and only so. A paper qualification is no more the proof of ability than is the silk hat of a gentleman. It is no more an end of study than is a sign-post the city towards which it points.

On the other hand, the distribution of diplomas, in the hands of competent and careful assessors, does narrow down the search for ability. It is true that there are many competent people who have ignored examinations, and relied upon their own powers of convincing the public, but, as a general rule, if they are big enough to do this successfully they stand high above their neighbours and are easily recognised. With the remainder one can at least be certain that the man who has qualified by examination has studied those things which wiser men have deemed it necessary for him to study to be fitted for the particular walk in life he has decided to qualify within. To some extent, indeed to a very large extent, the paper qualification must be accepted as something fairly good as a sign of competence, and for which we have not yet found an equally efficient substitute.

In another vein, one might hail the development as of prime importance to the public, because it provided an incentive to the coming builders to study their theory. The building trade contains many masters who are a mine of technical information. Such men have generally acquired it through years of practical experience, probably learning their most valuable lessons by the mistakes they have made—often, it may be, at the expense of others. And such men avoid mistakes now more by adopting an over-cautious margin of safety than by exercising any exact scientific knowledge. Caution is an excellent quality, but beyond a certain limit it is an extravagance which this stricken age can ill afford. It would be an excellent thing if the young builders of the future could be equipped with the scientific knowledge to enable them to undertake big and complicated things in structural enterprise with the confidence that knowledge brings, instead of stumbling timidly through years of experiment before arriving at the stage of self-confidence. The young student is a temperamental individual, and if he be of average human clay, he will need a near goal at which to aim, other than the distant prospect of a successful life well lived. It is for such as these that examinations answer a call. By providing the incentive to the student they do much to direct his studies along the right and useful lines. Unfortunately they encourage also the crammer and his coach, who by easy short cuts arrive at the stage of apparent knowledge without that sound foundation upon which the knowledge which lasts through life can alone be built up. Students are apt to think that they have ceased to be students when examinations have been safely passed, and often indeed they do cease to be students from that time on, to their own subsequent sorrow.

Another direction in which the public may look for the importance of this step in technical education would be the effect it may have upon the work of the technical schools. It is an amazing thing to most interested people how little the technical schools are used by the kind of student who would profit most by their advantages. Very few districts are so remote as to be out of touch with some such establishment, and yet the numbers who attend are quite disproportionately small in relation to the trading areas they cover. The public pays the bill, and it is a more expensive bill in relation to results than it would be if the attendances were doubled or made threefold. The reason for the neglect is obscure, but it is more than likely that that human liking for a definite near end accounts for some of the apathy, and that facilities for new and accredited qualifications would provide an incentive which these establishments may now lack.

Here we have explored several important reasons why this new venture of the Board of Education and the Institute of Builders might touch the imagination of the public. But we must confess that to us none of these reasons is such as to excite in us more than a mild and benevolent interest, and we must refer back to our head-line for the more paramount influence which has impelled us to devote our leading article to this subject. In so referring back we may apologise to those who have been anticipating a rare incursion into politics and have been disappointed; as also to those who have been led to fear such an incursion, feeling with us that these pages are not the place for such discussions. We do not propose to discuss either State-owned industries or the Mond plan. But we do wish to remark upon this striking instance of a disinterested co-operation between the State and an industry. Here we have what is probably the most important industry of the country definitely allied to a State department in a matter entirely unrelated to minimum wages, maximum hours or political levies. The alliance is founded only on an honest desire to produce in the next generation better and younger builders than we can at present claim to have. The scheme may not succeed in its immediate purpose, but the fact remains that the building industry and the State have stood shoulder to shoulder in a finely-conceived scheme, and we cannot believe that such a high purpose can long go unrewarded with good results.

We congratulate both the Board of Education and the Institute of Builders on their courage, and we trust that not only will their efforts succeed in the right direction, but that a fine model so set will be followed in many parallel directions by State departments and the greater industries of our country.

NOTES

The Office of Works.

It is apparently settled that there is to be a competition for the Scottish National Library, which is a satisfactory ending to the controversy which has taken place. But surely the decision of the Government to carry out the work on Calton Jail site is based on a wrong conception of the function of the Office of Works. What is the proper purpose and function of the Office of Works? It was always understood that the many activities in which it has been engaged had some definite limits, but apparently it is now seriously in conflict with the architectural profession in extending its work to the carrying out of new and important buildings. It is true that some serious inquiry was instituted as to the objects which come within the proper scope of its work. The Office of Works has been enabled to secure the services of many competent men for the carrying out of architectural work, and in the days, during and since the war, it has been easy enough to secure the services of those who have suffered from the depression which has pressed so hardly on the profession as a whole. But we may fairly ask how is an official body like the Office of Works to function in architectural practice as regards new and important buildings such as one would expect to come within the legitimate ambition and aim of independent professional architects?

The Practice of Architecture.

The study and practice of architecture cannot be carried on to-day with any real success without serious and long continued training and effort and the rewards are neither many nor great. It is only in the carrying out of large works that any approved and valuable pecuniary results can be obtained and it is surely only fair that all legitimate opportunities should be afforded for architects to secure such commissions. In small works, it is difficult to secure even a moderate living in architectural practice, though it is doubtless true that the interest the architect finds in his work is often much greater in the carrying out of very modest commissions than in the great buildings where commissions are calculated on vast masses of building which may contain little of detailed interest or charm. But we cannot conceive it to be right or fair that a great Government department should be able to enter the lists as competitor with architects for large and important new buildings. There are many things which the Office of Works is rightly engaged upon and ably carries out. Can it, however, usurp the functions of a private practitioner, who has every inducement to carry out his artistic inspiration beyond what is likely to be the aim of an architect in a Government department? If the Royal Institute of British Architects were a mere Trade Union, they would fight against the encroachment on the architects' preserves, but its ranks include official architects of reputation, and all it can do is to plead for the fair and open field for architectural practice.

A Hope for Edinburgh.

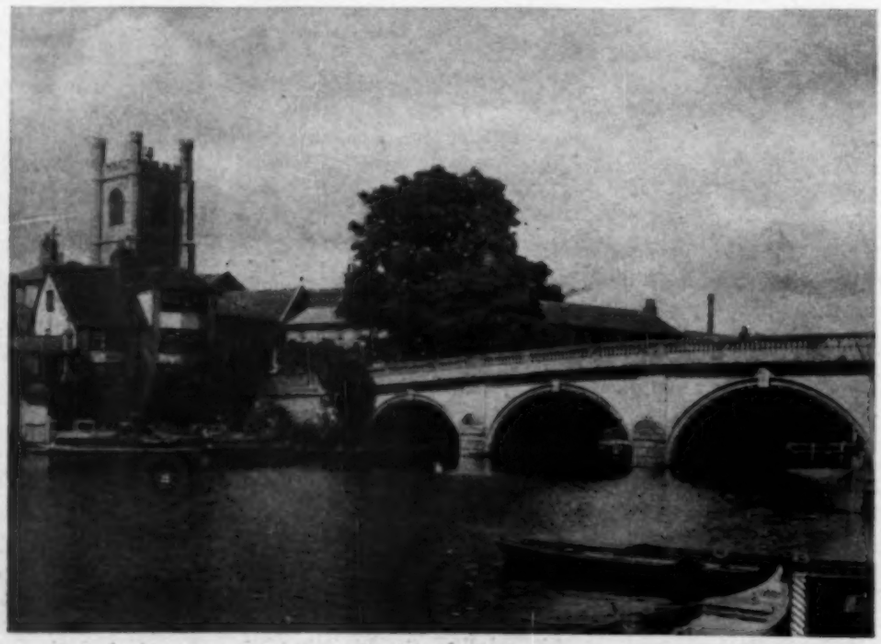
If the proposed survey of the city of Edinburgh is at once carried out, it is just possible, as Mr. Nigel Bruce suggests, that the criticism of the Royal Fine Arts Commission for Scotland on the Calton Jail proposals may lead to some alternative scheme. The number of representative artistic bodies in Edinburgh which support the claim for the best representative independent architectural skill being devoted to the scheme for Calton Hill ought to have real weight with the authorities.

Assistants for the Office of Works.

The Office of Works advertises in *The Times* of January 24, for Architectural Assistants experienced in the preparation of drawings for public buildings. The Department has a large staff of senior architects, architects, first- and second-class architectural assistants, and first- and second-class assistant architects. It has been stated that they have specialised in the preparation of designs for the classes of buildings that the Department usually undertakes, and, we may ask, what are the new men wanted for? One of our correspondents says: "During the war a large amount of work was done in the Department by private architects, who, owing to the stoppage of private work by the Government, had to take engagements as draughtsmen. The permanent officials took the credit of their work; do they wish to repeat the practice?"

Mid-Cheshire Town-Planning.

The surveyors responsible for the Mid-Cheshire Town Planning Report, just published, strongly emphasise the fact that there is a need for control in the design and construction of all types of buildings. They point out that their area, being mostly of a rural character, is particularly suited to the preservation of the existing beauty of the countryside, and at the same time offers possibilities for the lay-out of "group development housing," where architectural skill would blend harmoniously with natural beauty. They urge that architectural amenity is not purely the outcome of finance, but that much depends on the architect and



Henley Bridge.

From "The Thames Valley from Cricklade to Staines." (*See page* 310.)

Mill at Cokethorpe, near Witney, Oxon.

in the designing of houses suitable for that district in which they are to be erected. "Even cheap buildings do not necessarily mean ugly ones." The report states that in the area 3,651 houses have been erected by local authorities since the war, while private enterprise has accounted for 6,529. There are two novelties in the report. In the first place, several pages are devoted to lay-out plans, and also to elevations of types of houses erected in such areas as Crewe, Runcorn, and Macclesfield. The Committee further state that as so much depends on mutual good will every effort should be made to popularise the movement by lectures and propaganda.

"A Society for Ugliness."

Satire that comes sus-piciously near the truth is to be found in an article in a recent issue of *Punch*, under the initials "A.P.H." Dealing with Sir Herbert Morgan's appeal in the *Daily Telegraph* for a union of societies to which we have previously referred, "A.P.H." remarks:—"I fear that it is little use to appeal to most of us in the name of Beauty. The word frightens us, as many words do. If you ask the average Briton to attach proper importance to Purity he will either blush or catch you a sock in the jaw; but if you say that this or that is the action of a dirty dog he will heartily agree. In the same way the Society for the Preservation of Rural Beauty would have even more success if it were called the Society for the Removal of Eyesores. And I suggest to Sir Herbert Morgan that he should go a step further and found a Society for the Exhibition of Ugliness, whose function shall be to set up here and there such examples of ugliness as no one could fail to observe."

Dustmen at Newlands Corner.

Proceeding, he says:—"Take Newlands Corner and other favourite commons and picnic-places. If picnickers could see the scenes of their revelry on the day after Bank Holiday they would be startled if not ashamed. I believe there are excellent societies who go round clearing up the litter at beauty-spots. Quite the wrong principle. My society, which will have Government support, will go to the beauty-spot *the day before Bank Holiday* with lorry-loads of tin-cans, paper bags, and old newspapers, and strew the stuff about. Every day for a week the dustmen of London will deposit their loads on Hampstead Heath. The litter fiend would then *find* the beauty spot as he is in the habit of leaving it; and that, I fancy, would make him think as nothing else does."

The Birmingham Architectural Association.

The Green book of the Birmingham Architectural Association has just been issued. It chronicles the fifty-fourth session of the Association with its fifty full-time students in the School of Architecture, and includes some well-produced and interesting illustrations in colour and black-and-white by Messrs. C. E. Bateman, A. E. McKewan, G. Solway Nicol, J. Coulson Nicol and H. P. Cart de Lafontaine.

The Pastel Exhibition.

The thirty-first Pastel Society exhibition at the Royal Institute was quite attractive, and the arrangement of the works of members in separate groups was a good one. The prominent place of the large gallery was occupied by a large picture of Paddington Station by H. D. Richter. This is a very effective piece with an attractive air of mystery and good breadth of effect, but one feels that a colourist like Mr. Richter might have added some slight note of bright colour to relieve a little the rather over-emphasised murkiness. Wm. Redworth, Terrick Williams, Leonard Richmond, Leonard Squirrell and J. Littlejohns are amongst those who gave quality.

Building Acts Revision.

On another page will be found a letter from Mr. Louis Blanc, L.R.I.B.A., hon. secretary of the R.I.B.A. Building Acts Committee, in which the writer stresses the urgency of the need for revision of the London Building Acts. What appears to be required is the modernisation and simplification of the Acts and their unification with the various borough council by-laws. The need for modernisation, it is contended, is self-evident, and the need for simplification hardly less so. It is a considerable task in itself to understand parts of the Acts, let alone interpret them into a building. To lay down what *may* be done rather than constant use of the words "May *not*" would be a step in this direction. We believe that the R.I.B.A., at considerable effort, have prepared an amended version of the Act, and the London County Council have before them their Architect's recommendations, made after his American tour some years ago. We hope the L.C.C. Building Acts Committee may get into active communication with the R.I.B.A. on the subject.

Cottage at Muchelney, Somerset.

GENERAL NEWS

Professional Announcements.

Mr. Hedley J. Cannon, of the Surveyor's Department of the Berkhamsted Urban District Council, has been appointed junior assistant to Newmarket Urban District Council.

Mr. S. E. Edmonds, of Sheffield, has been appointed architectural assistant in the City Architect's Department, Exeter.

Mr. J. P. Lovell, L.R.I.B.A., has been appointed Estates Manager of the Derby Corporation. He is at present surveyor in the Estates Office of the L.M.S. Railway.

A Surveyor's Estate.

Mr. Reginald Smith Woolley (71), of Minster-yard, Lincoln, land agent and surveyor (net personalty £28,337), left £28,428.

Reconstruction of Wigan Theatre.

Messrs. Gray and Evans, 51, North John-street, Liverpool, are architects for the proposed reconstruction of the Royal Court Theatre, Wigan, for the Wigan Entertainments Co., Ltd. Reconstruction is expected to commence in April.

A Bourdelle Exhibition.

There will be held this month, at the Leicester Galleries, Leicester-square, a Memorial Exhibition of Sculpture by the late Antoine Bourdelle, who died in October last at the age of sixty-eight. The collection which will be shown will be completely representative and will embrace all Bourdelle's finest works.

Faraday Medal.

The Council of the Institution of Electrical Engineers have made the ninth award of the Faraday Medal to Sir Ernest Rutherford, O.M., F.R.S. The Faraday Medal is awarded by the Council of the Institution not more frequently than once a year, either for notable scientific or industrial achievement in electrical engineering or for conspicuous service rendered to the advancement of electrical science without restriction as regards nationality, country of residence, or membership of the Institution.

Royal Gold Medal for Architecture.

At a special general meeting of the Royal Institute of British Architects, on February 3, Mr. Percy Scott Worthington, M.A.Oxon., Litt.D., F.S.A., F.R.I.B.A., was elected by the members, and his name will be submitted to His Majesty the King, as a fit recipient of the Royal Gold Medal for Architecture for the year 1930. The medal was presented last year to Monsieur V. A. F. Laloux, Honorary Corresponding Member of the R.I.B.A.

Syon Park.

The proposal which has been under the consideration of the Middlesex County Council to use a large part of Syon Park for the purpose of a central sewage works has been dropped, in deference to the expression of public opinion against the scheme. This decision was reached on Tuesday at a special meeting of the Rivers Committee of the Council, presided over by Sir Montagu Sharpe. Reference was made to the strong opposition which the proposal had aroused in the Press and from public authorities, and also to the trend of the Council's discussion on the subject. The scheme for a central sewage works will be proceeded with, but the committee will endeavour to find another site.

The Institute of Fuel.

The Council of the Institute of Fuel invite competition for a Medal, together with a prize of books or instruments to the value of £5, to be awarded annually for a paper submitted by a student member of the Institute. The paper shall deal with some subject relating to the preparation or utilisation of fuel, or allied subjects, which comes within the purview of the activities of the Institute. Particulars of the competition can be obtained on application to the Secretary, 53, Victoria-street, S.W.1. Telephone: Victoria 1735.

War Graves Work.

Good progress is being made with the preparation for a memorial to the missing at Thiepval. This will correspond to the Menin Gate in Belgium, and will be one of the finest of all the War Memorials in France. The extent of the money still being expended on architectural and technical staff employed by the Imperial War Graves Commission is shown by the fact that for the last financial year the total spent on salaries, wages and allowances was over £70,000, and the total paid to contractors and for materials and labour was over £306,000.

The Tite Prize and the Victory Scholarship, 1930.

The attention of intending competitors is called to the fact that the preliminary competitions for the Tite Prize and the Victory Scholarship will be held in London and at centres in the provinces on Thursday, March 6, and Friday, March 7, respectively. Forms of application for admission to the preliminary competitions may be obtained at the R.I.B.A., 9, Conduit-street, W.1. The closing date for the submission of forms of application is Saturday, February 22.

Essex Beauty Spot.

A meeting of Woodford and Buckhurst Hill residents, held at Woodford Green, affirmed a proposal that a preliminary committee be appointed to consider the practicability of acquiring for the public for ever part of the Knighton estate, which for over sixty years was the residence of the late Mr. Edward North Buxton. By the recent death of Mrs. Buxton, the estate has come into the market for building purposes. It comprises about 100 acres. The meeting approved of the acquisition of half this area, including the woodland portion and two lakes. This portion is partly in Woodford and partly in Buckhurst Hill. A communication was read from the City of London Corporation intimating that if the local people manifested in a practical way their desire to preserve the beauty spots for the use of the public the movement would have the sympathetic support of the Corporation, which also would be prepared to administer it under the Epping Forest Act of 1878.

National Parks.

The National Park Committee met on February 4 at the Ministry of Agriculture under the presidency of Dr. Addison. The proceedings were private, but it was officially stated that the committee received evidence from Mr. Barry Parker, F.R.I.B.A., president of the Town Planning Institute, supported by Mr. Longstreth Thompson, and Mr. A. R. Potter. The witnesses took the view that the provision of national parks should be regarded as part of a scheme for an extended application of the principle of regional planning. Regional committees were now mainly advisory. They might be given limited executive powers; for example, powers to reserve large open spaces and to lay down road routes. At the present time, owners of land reserved for agriculture or as private open spaces were entitled to compensation for loss of prospective building value, which was transferred to other land. It would facilitate operations under the Town Planning Acts if private interests could be pooled. In the view of the Institute, national parks should be component parts of a national scheme of parkways, parks, open spaces and playing fields, linked together by through traffic roads which were not development roads. A scheme was put forward for the acquisition and preservation of the Snowdon area.

COMPETITION NEWS

Open-air School, West Hartlepool.

The West Hartlepool Education Committee has decided to hold a competition for an open-air school. Mr. E. J. Willie, the County Architect, is to act as assessor.

Proposed New Guildford Municipal Offices.

Guildford Town Council has adopted a new scheme for the adaptation of Messrs. May & Jacobs's old premises in the High-street as temporary municipal offices at an estimated cost of £12,000. Tenders have now to be obtained, and the Council will have to decide whether to accept one or not. The architect is Mr. T. R. Clemence, F.R.I.B.A., of 59, Quarry-street, Guildford.

Clydebank War Memorial: Cenotaph.

The following notice has been issued by the R.I.B.A. :—

The Competitions Committee desire to call the attention of members to the fact that the conditions of the above competition are not in accordance with the Regulations of the R.I.B.A. The Competitions Committee are in negotiation with the promoters in the hope of securing an amendment. In the meantime, members should not take part.

Municipal Pavilion, Aberystwyth.

Mr. Arnold Thornely, F.R.I.B.A., the assessor in this competition, has made his award as follows :—

1st (£100 premium): Messrs. Stewart McLauchan & S. B. Howard, Royal Liver Buildings, Liverpool.

2nd (£70 premium): Messrs. Chas. F. Ellis, L.R.I.B.A. (Aberdovey), and T. Wynne-Thomas (Birmingham).

3rd (£30 premium): Messrs. J. J. Crow & Stockford Careless, AA.R.I.B.A., 2, Garden-court, Temple, E.C.4.

The building is estimated to cost between £25,000 and £30,000.

Nurses' Home, Leicester.

The Mental Hospital Committee of the Leicester Corporation are proposing to erect a new nurses' home on Gipsy-lane, with accommodation for 70 nurses, at an estimated cost of £28,000, and a limited competition for the appointment of architect has been held, confined to members of the Leicester and Leicestershire Society. Mr. J. Kirkland, F.R.I.B.A., the assessor, has adjudicated upon the fourteen designs submitted, and his award is as follows :—

1st (£100 premium): Mr. Trevor Sorday, A.R.I.B.A., 56, London-road, Leicester.

2nd (£75 premium): Messrs. Stockdale, Harrison & Sons, F. & A.R.I.B.A., 7, St. Martin's East, Leicester.

3rd (£50 premium): Mr. Frank Henry Jones, F.R.I.B.A., 5, Greyfriars, Leicester.

Proposed Drinking Fountain, Greenwich.

The Council of the Metropolitan Borough of Greenwich invites architects to submit designs in competition for a drinking fountain, which it is proposed to erect at Blackheath on a site facing the War Memorial at the junction of Maze Hill and Charlton Way. Premiums of £50, £20 and £10 are offered for the first three designs which are accepted and adjudged to be the first, second and third in order of merit, due regard being had to the appropriateness of the designs with the amenities of the immediate surroundings of the site. A copy of the conditions of the competition and instruction to competitors, together with a copy of the site plan, may be obtained upon application to the Town Clerk, accompanied by a stamped addressed foolscap envelope, and completed designs, endorsed "Design for Drinking Fountain," must be received (carriage paid) at the office of Mr. Frederick J. Simpson, Town Clerk, Town Hall, Greenwich-road, S.E.10, not later than 12 o'clock noon on Monday, March 10, 1930, in accordance with the terms of the conditions of the competition.

CORRESPONDENCE

Six Per Cent.

SIR,—Mr. Davidson wishes me to tell how I can make it pay to design individual houses at less than 6 per cent. He states that I am an architect and an artist. I have already stated in these columns that I am an onlooker, which means—I make this statement for the benefit of those whose interpretation of the word "onlooker" is hazy—that I look on. I have heard that "onlookers see most of the game," but whether they do or not, I can only say that while I was helping to stay the Hun, those of the profession of architecture not employed in so-called national service should have been able to devise a scheme which would have made this a country fit for onlookers to live in. Now, however, it is no use crying over spilled milk. Mr. Hastwell Grayson has been endeavouring to formulate a scheme. For my part, I suggest that specialisation is the keynote. Specialisation leads to both standardisation and simplification of work, and it would be by these means that architects would be at length doing their share of bringing architecture within the spending power of the people.

But there is another result to specialisation, and that is the realisation of Mr. Ramsay MacDonald's dream as propounded at Liverpool not many months ago—namely, that collective housing should take the place of individual housing; this, again, would tend to lessen the amount of work an architect is required to do. There is another way of making architecture more popular, and this is by multiplying the number of public exhibitions, like London has, all over the country. This would help to illustrate Mr. Davidson's point to a larger number of people than exist merely in the Capital and the Provinces, that it is cheaper to employ an architect. Then there is the much-vexed question of land-ownership. I, for one, should be very sorry to see the break-up of the land system which produced so much of our world-renowned domestic architecture, but I am sorrier still, as an onlooker, to see how in recent years it has failed to maintain its tradition. The Town Planning Act will lead to land nationalisation, and this in its turn will simplify the architect's work.

This brings me to the growth of officialism. I will not touch on the present controversy concerning Mr. Vincent Harris's design for the Whitehall building beyond stating that as a matter of courtesy Mr. Harris, if he still cares to do so after all the treatment to which he has been subjected, should do this job. But I will say that I view with approval the growth of Government control. "Tommy Atkins" has to obey orders; why not also "Thomas Architect"? It would be well for architects to cease from "kicking against the pricks," for by so doing they are interfering with the popularisation of their art. Gladstone, Disraeli, Hector Macdonald, and Kitchener were officials—were they not also genii?

As Sir Banister Fletcher recently stated, there is a great field for the architect in public service. By the means, therefore, of specialisation leading to standardisation and simplification, by the nationalisation of land leading to architectural design in the collective or "grand" rather than to the individual manner, and by the realisation that in public service there is no disgrace and that discipline and officialism encourages rather than kills genius, by the education of the people, by popularising exhibitions, in the self-evident truth that the employment of an architect lessens cost and, by the payment for services in accordance with their true value to the nation—by all these means can the architect design for a commission less than 6 per cent.

O. NEWBOLD.

London Building Acts.

SIR,—With further reference to my recent letter on the London Building Acts and your kind offer to give space for a continuation of the subject, the Building Acts Committee of the R.I.B.A. are meeting shortly, and it is my intention to place your offer before them, and I hope that some of the members will be able to contribute further particulars.

At this stage it would seem that nearly everything has been done to bring the need for reform to the notice of the London County Council, and it is understood that a consolidation Bill is before Parliament, or may already have been passed. This Bill is merely a preliminary to reform or amendment, for which another Bill will still be required. What is really needed at once is some means by which the matter can be expedited.

It is ten years since Mr. Austen Hall read his paper at the R.I.B.A. on "American Stores," and called attention to the hampering effect of our London Regulations for this class of building. The R.I.B.A. Building Acts Committee was formed as a direct outcome of the paper (see the *R.I.B.A. Journal* for April 10, 1920), and they have fully dissected the Building Acts, and their conclusions were published by the R.I.B.A. in 1926.

Mr. Topham Forrest was sent to America to study the subject by the L.C.C., and his report was published in 1925. Various technical societies have placed their views before the L.C.C., and the daily Press has given the matter considerable notice.

The most pressing reform, and one which would give great relief to a large number of building owners, is the removal of the restrictive height limit on trade buildings, which have to be 20 ft. less in height than the Building Acts permit. The Act of 1908 repealed a previous height restriction contained in the 1894 Act, and it would seem that the intention then was to give relief to trade buildings. Two years later the L.C.C. published a Code of Regulations, which, with some slight modifications, to-day govern the erection of such buildings. The height restriction was again introduced, and there are many other restrictive clauses which hamper the development of all large buildings used for trade or manufacture.

It is this Code which requires immediate amendment, and as it was made by the L.C.C., they can alter it in any way they please, without reference to Parliament. Ten years is a very long time to wait for an amendment, which the Council's own architect has advised as necessary.

Perhaps you may be able to suggest some action by which the Council's procedure can be accelerated, as meanwhile we continue to erect buildings which do not economically fulfil their purpose, and we have already expended many millions during the period of active discussion.

LOUIS BLANC,
Hon. Secretary, R.I.B.A. London
Building Acts Committee

The Drawing of Architecture.

SIR,—In his letter of January 24 on this subject, Mr. Davidson expresses doubt whether it is possible to be an architect without being an artist. Of course it is possible—so long as a sufficient section of the public is left in ignorance of the fact.* So far as artistic ability is involved, it is open to almost anyone to be a stuntmonger or an exponent of so-called tradition—the one with jargon and the other with copy-books.

M. M.

SIR,—The findings of the photographers on the perspective question are a valuable contribution. Artists will be grateful for this. Two years ago I found that my camera *did* alter the perspective. Recent experiments show that other cameras have not the same outlook. A word from the photographers themselves is most reassuring. For my apparent contradictions I must plead the artistic temperament; at any rate, it is satisfactory now to note that Mr. Davidson admits my point that the art of the human eye is the art which appeals most to everybody. There is, however, too much made of the Old Colour Masters, such as Titian, Turner, or Cox, and too little of the less obviously great men (great because they deal in greater contrasts, viz., blackest blacks and whitest whites), such as Railton, F. L. Griggs, Sydney R. Jones, or E. H. New.

O. NEWBOLD.

[*This may be clear to our readers, but it is not quite clear to us.—ED.]

Domestic Building and Quantities.

SIR,—It is unquestionably right and proper that Mr. J. M. Theobald, as hon. secretary of the Quantity Surveyors' Committee of the Surveyors' Institution, should be jealous of any proposal that would appear to him to worsen the position of his members. I am, however, firmly of opinion that the proposal to vary the method of paying the fees, far from worsening their position would in the long run considerably strengthen it. Any other result I should regard with dismay.

I believe that it would be in the best interests of all parties to a building contract that the qualified surveyor should be called upon to undertake additional duties to those of the preparation of the original bills. I would endeavour to free the architect as far as possible from the worry entailed by the business side, and for this reason would transfer to the surveyor the duty of issuing all certificates except that of satisfactory completion. I would have the surveyor's name always inserted into a clause similar to that numbered 13 in the R.I.B.A. Conditions of Contract. In several other ways I would endeavour to bring the surveyor into closer contact with the contract for reasons that cannot be satisfactorily set out except at much greater length than is here permissible. I do not believe that the architect would lose any prestige by the delegation of these duties, and I hold firmly to the opinion that this course would result in the wider employment of the surveyor and benefit both builder and building owner.

J. R. TAYLOR.

SIR,—Mr. J. R. Taylor, in his reply to my letter on the subject of guaranteed quantities, appears to overlook the fact that the quantity surveyor is a professional man, not a merchant. If he is selected with the same care as a doctor or a solicitor would be selected, the question does not arise.

ARTHUR J. WILLIS.

Smoke Abatement.

SIR,—The Report on Smoke Abatement prepared by a Committee of the Royal Institute of British Architects is remarkable for the fact that the Committee makes detailed reference to the effect of smoke upon one kind of building material only, viz., stone. It is true that the Report states that "sulphuric acid particularly corrodes or disintegrates practically all kinds of building materials," but it would certainly have been of more interest to architects and others if the Committee had pointed out that well-burnt clay products will successfully withstand the smoke-laden atmospheres of our great cities, as evidenced by the successful use of bricks, terra-cotta and faience on thousands of buildings which, after standing for many more years than the decayed stone buildings which the Committee deplores, show no signs of corrosion or disintegration.

H. HALLIDAY, General Secretary,
National Federation of Clay Industries.

(*Correspondence continued on page* 315.)

GREEK SEPULCHRAL MONUMENTS—III

By ARNOLD WHITTICK.

The custom in Greece of erecting monuments principally to those who died in battle or who died young was gradually superseded by the stele showing the family group. Between 420 and 300 B.C., a large number of the monuments are of this family character, sometimes being inscribed with two, or more rarely three, names as in numerous modern gravestones. The distinction between the family group and the portrait must not be too strongly marked, for in cases like a stele showing a seated lady with servants (who merely act as accessories), the type, though contemporary with, and usually classed as, a family group, is more a portrait. I will, however, for convenience in classifying them, confine my designation of the portrait stelæ to single figures, and to those with completely subordinate figure accessories, and of family groups to those showing more than one prominent figure wherein a figure group is formed.

The two principal subjects, then, of the stelæ are : (1) the portrait, and (2) the family group; the former belonging mainly to the fifth and early years of the fourth century, and the latter mainly to the late years of the fifth and to the fourth century; while it is chiefly at Athens and its vicinity that the most numerous and finest examples have been discovered.

(1) Many of the early portrait stelæ follow the general design of the famous archaic stele of Ariston. A standing figure in profile occupies a long narrow slab, the ornamental accessories of which become more elaborate with later examples. A particularly fine example, from Thespiæ in Bœotia represents the standing figure in profile of a young naked athlete with a dog at his feet, which looks up at its master (Fig. 6). Its design, the lowness of the relief, the excellence of the modelling and convincing rendering of form that it displays make it a typical work of the middle of the fifth century. Another interesting example of the standing figure and narrow slab (about 5 ft. 4 in. high by 1 ft. 6 in. wide), surmounted in this case with the anthemion, is that of a young girl named Aristomache, who is represented holding and gazing at a doll. As I have already mentioned, the architectural development of the framework of these sculptures shows stelæ, towards the end of the fifth century, designed like the façade of a temple: pilasters on either side were surmounted by a pediment with acroteria, the portrait or family group being carved in the recess between the pilasters. A good example of a portrait stele of this kind (about 9 ft. 6 in. high)* from the Cerameicus at Athens, is of a warrior named Aristonautes, who is represented in the full vigour of battle. In this work, which is of the early fourth century, the recess is so deep and the figure in such high relief that it is almost in the round. The Dexilos† monument (about 5 ft. 9 in. high by 4 ft. 9 in. wide), also from the Cerameicus, which bears the date 394 B.C., showing a mounted warrior slaying his adversary who lies prostrate beneath the rearing horse, is probably the most famous stele of a warrior. The vigorous life so convincingly rendered and the excellence of the design make it worthy of being a Parthenon metope.

In the stelæ showing single seated figures the portrait is usually of an elderly man or of a woman, although those of younger men occasionally occur. The finest of these seated figures and one of the finest extant works of Greek sculpture is that of Tynnias, the son of Tynnon, an Athenian citizen of the fifth century (Fig. 7). (The stele is about 3 ft. 10 in. high by 1 ft. 10 in. wide.) Represented as well advanced in years, and depicted in a contemplative mood, Tynnias is seated on a chair, with a long staff leaning against him. The figure is simply and grandly conceived, and is distinguished by such dignified solemnity that this man would, as Professor Gardner says, "sit undisgraced among the seated gods of the Parthenon frieze."‡ The small stele of Mynno (about 2 ft. high by 11 in. wide), probably of the fifth century, affords an example of the seated figure of a woman who, in this case, is represented engaged in the domestic occupation of twisting a thread on a distaff. Of seated young men, Professor Gardner cites two examples: the stele of Democleides, which shows a young man seated in dejection on the deck of a galley with his helmet and shield behind him, from which it may be deduced that he was a soldier who perished at sea;§ and a fourth century relief of a young man, probably an author or student of letters reading from a scroll.* Lord Newton possesses the fragment of a unique stele, probably from Athens, of a young man seated, holding in his hand a comic mask at which he gazes intently, while another mask hangs above him to the left, indicating the stele of an actor.†

It will be observed that in these stelæ the individuals are represented in capacities characteristic of their lives, probably slightly idealised. The young man appears as an athlete, the soldier in the flush of action or in a moment of triumph, the actor contemplating the disguises by which he acts another life, the girl innocently employed with childish amusements, and the woman engaged in domestic pursuits. Portraiture in the sense of realistic representation of individuals had hardly any existence in the fifth century.‡ The gods were the principal subjects of sculpture, and in making their statues the sculptors necessarily aimed at creating an ideal of a type. This influenced the lesser sculptors of the stelæ, principally, I suspect, by making realistic depictures of individuals a little foreign to the Greek mind, and so the portraits of the stelæ were rather expressions of types than of individuals. Commercial consideration was probably also an influence, for representations of types could be made and stocked for sale; a facility impossible with realistic portraiture.

(2) The stelæ showing family groups are the most perfect and celebrated of the sepulchral monuments of Greece. Most of the important examples are from Athens, and a selection of these form the material of the following notes. The general character and design of many of the earlier examples suggest that they are a development of the

* Conze does not give the width.

† A cast is in the British Museum.

Fig. 6.—*The stele shown on the left is of an athlete with dog. From Thespiae in Boeotia, now in the National Museum at Athens. Fifth-century work. The stele shown on the right affords an example of the early flat type of anthemion crest.*

‡ *Op. cit.* p. 145.

§ *Ibid*, p. 154.

* *Ibid*, p. 153.

† See Mrs. Eugenie Strong, "Journal of Hellenic Studies, 1903, p. 359.

‡ The only work of the fifth century that would appear to show any attempt at realism was the bust of Pericles, by Cresilas dedicated to Athena. See Professor E. A. Gardner's "Handbook of Greek Sculpture," pp. 487, 488. The bust of Pericles in the British Museum, of the third or second century B.C. may be a copy of the work of Cresilas.

FIG. 7.—*Stele of Tynnias, the son of Tynnon, an Athenian citizen. Fifth century. Now in the National Museum at Athens.*

Spartan stelæ representing ancestor worship. In the two early groups, probably of about the middle of the fifth century, of Euempolus and of Xanthippes* (about 2 ft. 9 in. high by 1 ft. 8 in. wide), a seated figure of a man is surrounded by figures on a much smaller scale much in the style of the Spartan reliefs. But in the Athenian works the action of the figures is that of children surrounding a parent, yet the influence of the Spartan stelæ is particularly noticeable in the disproportionate smallness of the children and the fact that they are the figures of small adults rather than of children.

The stele known as the Leucothea relief† (about 4 ft. 5 in. high by 3 ft. 8 in. wide), though probably earlier than the stelæ of Euempolus and Xanthippes, yet seems to me to mark a stage of conceptual development from these and the Spartan reliefs to the later family groups. In this stelæ a seated woman, probably the mother, is surrounded by children, one of whom she holds in her arms, while on the right a standing figure, doubtless of the nurse, holds a cincture up to the mother, which Professor Gardner calls a wreath.‡ The standing figure of the nurse is on the same scale as the seated figure of the mother, and the children though diminutive, approach a little nearer to actual size in relation to these adult figures. In later works on the mainland of Greece these arbitrarily proportioned figures give place to the more realistically proportioned figures of the farewell scene between husband and wife, parents or parent and child, mistress and servants, etc., though in Asia Minor there are a few late examples of diminutive figures of children like tiny adults surrounding a principal figure very much in the early Spartan and Athenian tradition.

A distinctive and unusual stele (about 3 ft. 2 in. high by 1 ft. 5 in. wide) of about the middle of the fifth century, is that of Chaerestrata and Lysander, mother and son (Fig. 8). The design seems influenced by the early portrait stelæ which show standing figures in profile in a long vertical panel, for here the two figures, in low relief, are both depicted standing in profile and facing each other. The mother is handing to her son a bird that she holds by the wings, while her son puts forward his hand to receive it. Though apparently influenced by earlier portrait stele it is free from archaic stiffness; the figures are portrayed with life, the drapery that clothes each figure is designed in beautiful graceful folds, and the dignified simplicity of the conception imparts to the subject an impressive solemnity.

(To be continued.)

"THE BUILDER" DEBATE

XXVI.—The R.I.B.A. as a Federation.

SIR,—"Positive's" methods of presenting his case seem to me to bear a remarkable resemblance to the traditional and perhaps now out-of-date technique of the Prince of Darkness in such stories as that of Dr. Faustus. He is too sweetly logical and coos like a very sucking dove in putting before your readers such a simple proposition that one can only be astonished that this simple means of ending all dissensions between provincial members and their (alleged) more fortunate London brethren has not been thought of before.

But, as many of your readers will know, this matter is really no new and bright idea, but rather a stage bogey more suited to a Christmas pantomime than to a debate in your columns. The boot, in fact, is, if anything, upon the other leg: if your correspondent knew the great influence of a body known as the "Allied Societies Conference" in the councils of the R.I.B.A., he would hesitate to say that London has an unfair preponderance in representation.

There are many sound reasons against "Positive's" proposal, but I will not take up your space by detailing them: they are obvious to most intelligent persons (including architects) of not only our own country, but most other civilised nations. In France, for example, where the spirit of Liberty, Equality and Fraternity is given official recognition and placed on all public buildings, there is a very strong and active Federation, but this does not mean that the two societies, the *Société Centrale* and the *Société des Architectes Diplômés*, have become mere Allied Societies for Paris. In fact, the contrary is precisely what has marked post-War development, and all the societies forming this Federation look for guidance and support to the central bodies in Paris, and to a much greater extent than when the Federation was weak in provincial centres. The same support of the central body exists in Holland and other countries where architecture is a living thing.

And it is easy for the unbiased mind to perceive why this is so. Every successful organisation tends more and more to centralisation in administration and in the responsibility for decisions of policy. In every type of efficient organisation the aim is to prevent duplication and unnecessary work. Yet here, in "Positive's" statement of his case, is a retrogressive step which would add enormously to the difficulties of administration (possibly "Positive" does not realise that the imagined perquisites of his London practitioner are more than balanced by the amount of business which has to be dealt with by his *favoured* London contemporaries, because they happen to be on the spot), and, as far as one can judge, there is no corresponding advantage to be gained by the institution of a Central London Society. In fact, the only sound and useful suggestion which "Positive" (who must, I think, be a sly humorist) makes, in his contribution to this debate, is that meetings of the central body might be held at more frequent intervals in one or other of the provincial centres. This is a sound idea, and should it be followed up by "Positive," I have no doubt it could be sympathetically considered by the existing central body, and certainly supported by

NEGATIVE.

∴ Correspondence on this subject is invited.—ED.

Mr. D. S. MacColl.

Mr. D. S. MacColl has retired from the executive and vice-chairmanship of the National Art Collections Fund. Mr. MacColl was formerly director of the Tate Gallery and keeper of the Wallace Collection.

The Amenities of Cambridgeshire.

A Cambridgeshire branch of the Council for the Preservation of Rural England was founded recently at a well-attended meeting in the Guildhall, Cambridge. A resolution pledging the meeting to support the county branch of the Council for the Preservation of Rural England was proposed by Lord Crawford. The countryside, he said, was in great danger not only of disfigurement, but of actual degradation. The C.P.R.E. was a guarantee that they were in touch with the best-informed people from the legal and technical point of view, and likewise from the local and educational point of view. The existing law was not sufficiently strong, and although the C.P.R.E. were taking an active part in assisting Sir Edward Hilton Young, who was introducing a Bill into the House of Commons, they did not wish to indicate that they only trusted to legislation. Legislation could do a great deal, but it was of very little use unless public opinion was alive and desired to put that legislation in force.

FIG. 8.—*Stele of Chaerestrata and Lysander, mother and son. Athenian, Fifth century.*

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* The latter is in the British Museum.

† A cast is in the British Museum.

‡ *Op. cit.* p. 166. Professor Gardner mentions as a possible explanation of its introduction that wreaths were common as decorations of the tomb, but it seems strange thus to introduce it in the family scene with this significance, as it would make a clumsy mixture of symbolism and representation of domestic life. If it is a wreath, it is, I think, more probably introduced as an article of personal adornment, which was not then uncommon, but there is really little reason to suppose that it is not merely a wrap for the child.

ILLUSTRATIONS

PLATES

British Exhibit, Antwerp International Exhibition.

This building has been designed to contain the British section of the International Exhibition to be held at Antwerp this year. Messrs. Richardson & Gill, FF.R.I.B.A., are responsible for the interior decoration and the plan of the galleries, the exterior of the building having been designed by Sir Edwin Lutyens, R.A. The scheme comprises a central court with historical exhibits and galleries for displaying shipping and aeronautical progress. The aim has been to introduce colour into the scheme with decorative adjuncts symbolic of sea power. Many such features have been designed by famous artists, including the Grieffenhagen frieze. The sculpture has been modelled by Mr. P. G. Bentham, A.R.B.S., the paintings are by Mr. Maurice Grieffenhagen, R.A., Mr. Anning Bell, R.A., Mr. Warren Wilson, A.R.C.A., and Mr. Norman Wilkinson.

Cambridge University Library.

The model of this proposed new building (prepared by Mr. John B. Thorp) was recently exhibited in the Senate House, Cambridge, to show modifications which have been embodied in the design. Sir Giles Gilbert Scott, R.A., F.R.I.B.A., is the architect.

Regent Cinema, Becontree.

This cinema, which has been erected in Green-lane, is the second picture-house to be built on the London County Council Housing Estate at Becontree and Dagenham. The building is designed in principle as a steel-frame structure. The whole of the loading is carried on the steelwork, the brickwork being panel construction of minimum thickness. The front elevation to Green-lane is faced with glazed terra-cotta "Hathernware," supplied and erected by the Hathern Station Brick and Terra-cotta Co., the return frontage to Waldegrave-road being in multi-colour "Osta" stocks supplied by J. Fenwick Owen, of Wheathampstead.

The general contractor was Mr. Henry Kent, and the principal sub-contractors were as follows:—Powers & Deane Ransome's, Ltd., steelwork construction; Diespeker & Co., fire-resisting floors; F. De Jong & Co., fibrous plaster work and interior decoration; Crittall Manufacturing Co., Ltd., steel sashes; Sulzer Bros., heating and ventilating installations; Merryweather & Co., fire appliances; Ragusa Asphalte Co., asphalt; Yannedis & Co., ironmongery; Wilmer & Sons, guardrails, external iron staircases, rain-water heads, sanitary fittings, and other sundries; W. H. Heywood & Co., lantern lights; Burdette & Co., electrical installation; H. H. Nutman, tiling; Art Pavements and Decorations, Ltd., floor coverings and mosaic work.

Messrs. Albion T. Snell & Partners acted as consulting engineers for the heating installation and electrical installation, and Messrs. Baker & Mallett were the quantity surveyors. Messrs. Lewis Solomon & Son, FF.R.I.B.A., are the architects.

New Premises, Dean-street, Soho.

This new building is constructed throughout in ferro-concrete, and strengths have been calculated and the building planned so that it is suitable for offices, showrooms, warehouse or factory purposes. The front elevation is in faience throughout, and the elevation to Soho-square is in cast stone. The building will be fitted with hot-water installation throughout and sprinklers will be installed to all floors. The frontage is about 103 ft. and the depth 116 ft., and there will be seven floors in all, including basement. The consulting engineers were Messrs. Considère Construction, Ltd., and the general contractors Messrs. Bovis, Ltd.

Messrs. North, Robin and Wilsdon are the architects.

Design for a Small Housing Scheme.

This design for a small housing scheme in a mining district of Kent was recently submitted by Mr. W. Thompson as a testimony of study for the R.I.B.A. final examination.

The Board of Architectural Education wish it to be known that these testimonies of study are published for the guidance of students, not as perfect solutions of the subjects, but to show the general standard of work approved by the R.I.B.A.

Warkworth Castle.

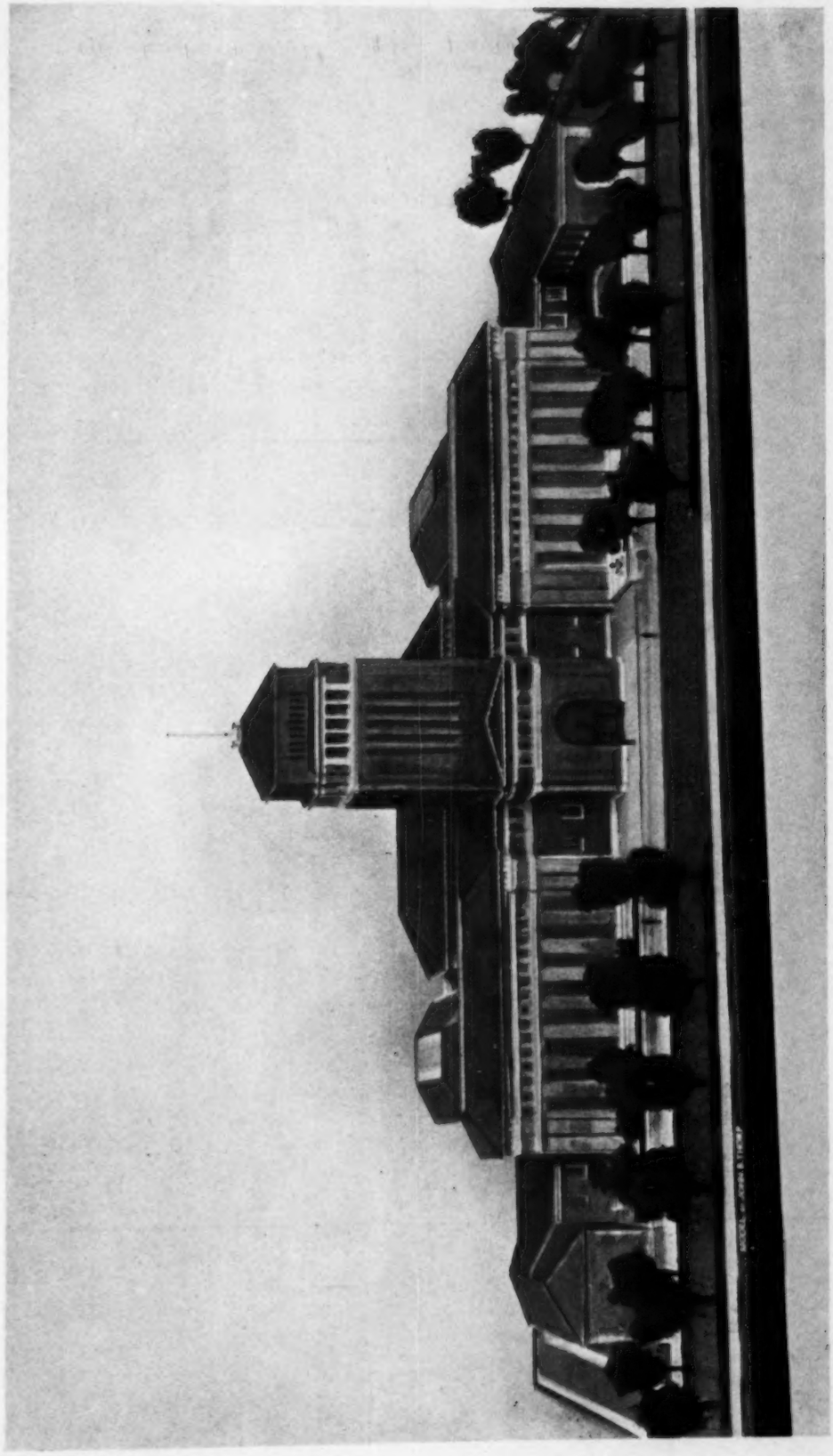
The illustrations which we give on our frontispiece and page 289 have been sent to us by Mr. William Davidson to support his contention that camera and eye perspective are similar. "Although," writes Mr. Davidson, "the sketch and photograph of the south front of Warkworth Castle are not from exactly the same station point, they are near enough for me to be accused of sketching from a photograph. The sketch was made several weeks before the photograph was taken. The bird's-eye view of Warkworth distinctly shows the Castle towers converging downwards, thus proving my contention that a bird's-eye photograph is more accurate than most bird's-eye perspective drawings."

Charing Cross Bridge.

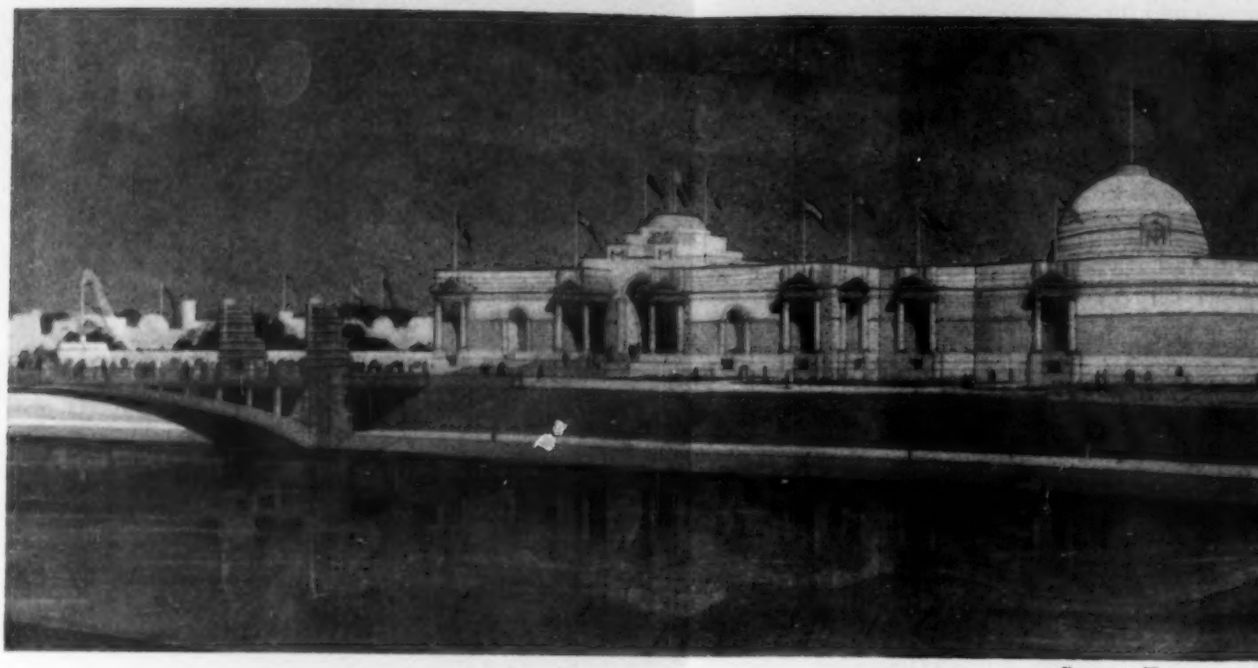
As followers of the Charing Cross Bridge controversy will know, the Ministry of Transport and the L.C.C. are having a large model prepared to submit to Parliament, together with the plans of the proposed Charing Cross Bridge scheme. The model, which will be made to a scale of about 44 ft. to an inch, is being prepared by Mr. John B. Thorp, whose models of Old London in the London Museum are so well known, and will cover an area of over 80 sq. ft. It will extend from the National Gallery to Blackfriars-road and Westminster Bridge-road, and from St. James's Park to Somerset House, and will show all the new roads to the intended scheme. Trafalgar-square will measure about 10 in. by 8 in., while the Nelson Column will be about 4 in. high. A portion of St. James's Park will be modelled, with a corner of the lake that adjoins the Horse Guards' Parade. The new Charing Cross Bridge will be in the centre of the model, and Waterloo Bridge and Westminster Bridge will be shown crossing the river, and the whole of Waterloo Station, together with the many streets surrounding it, will be modelled.

The Regent Cinema, Becontree: Entrance Vestibule.

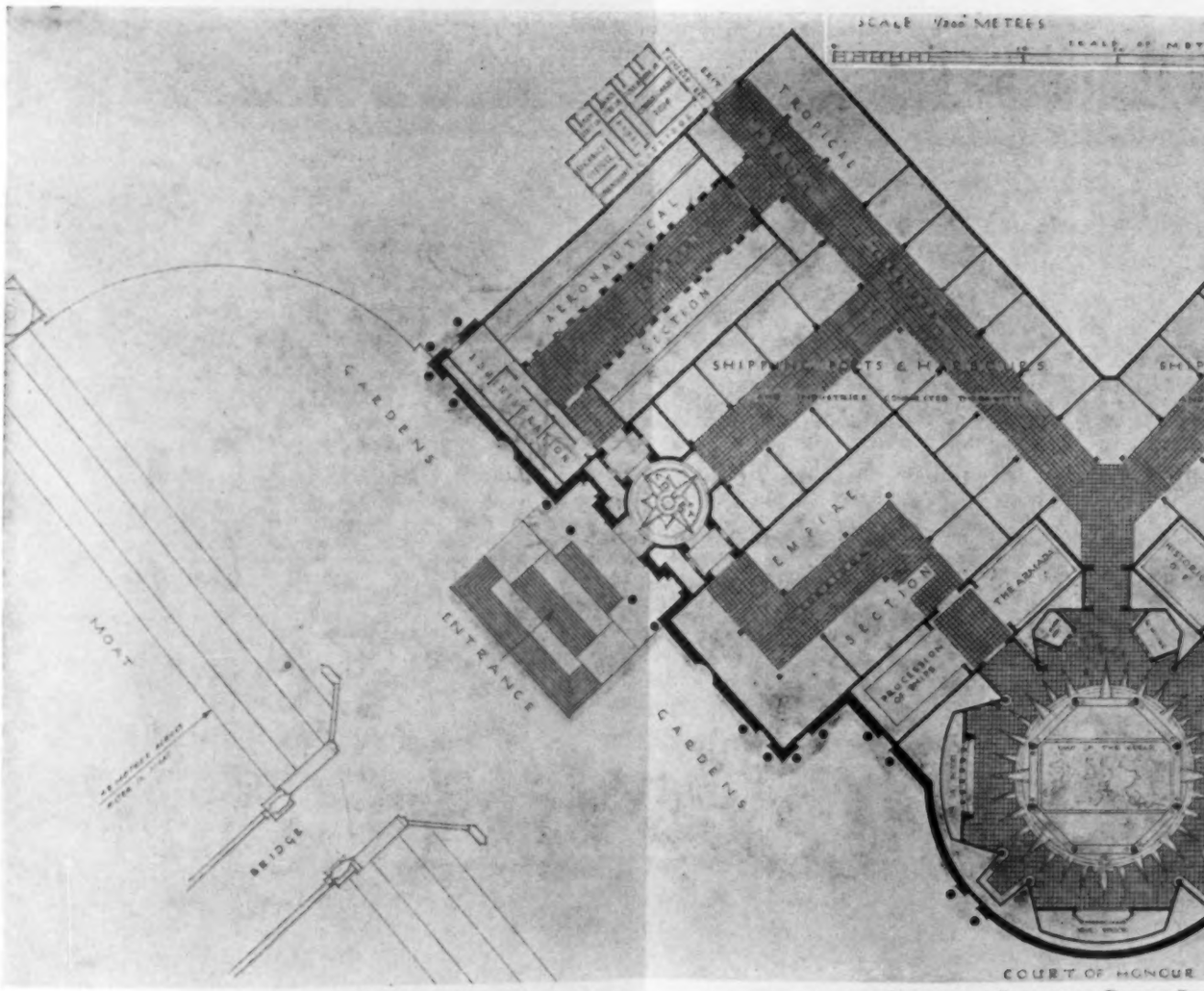
MESSRS. LEWIS SOLOMON & SON, FF.R.I.B.A., Architects.



Cambridge University Library: From a Model.
SIR GILES GILBERT SCOTT, R.A., F.R.I.B.A., Architect.



GENERAL VIEW.



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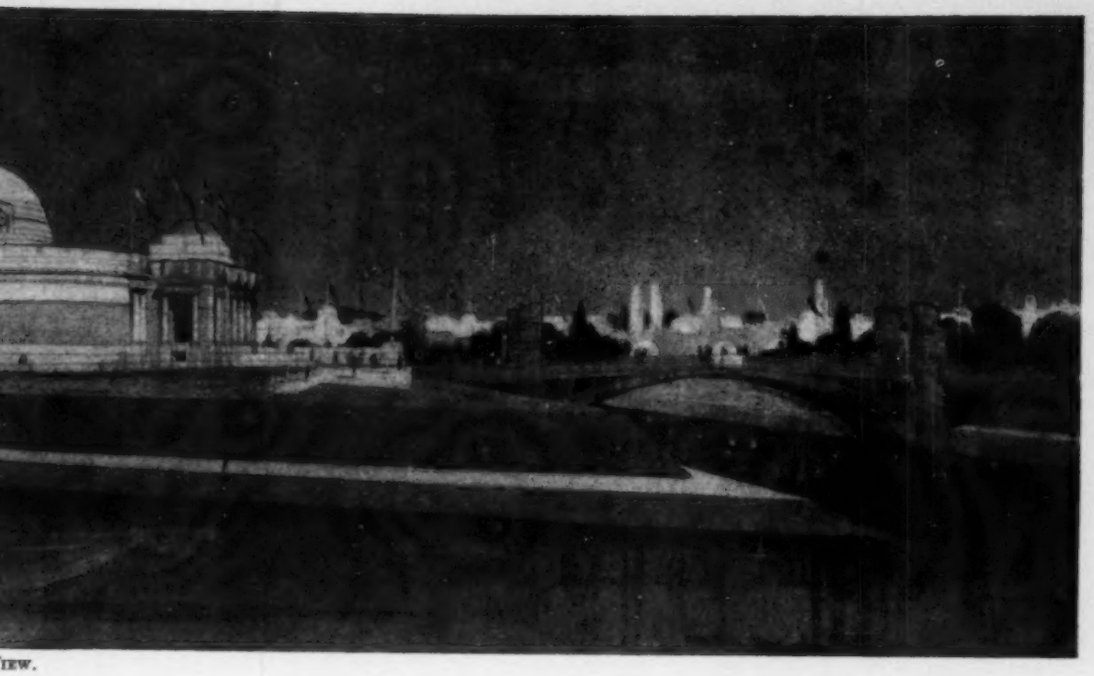

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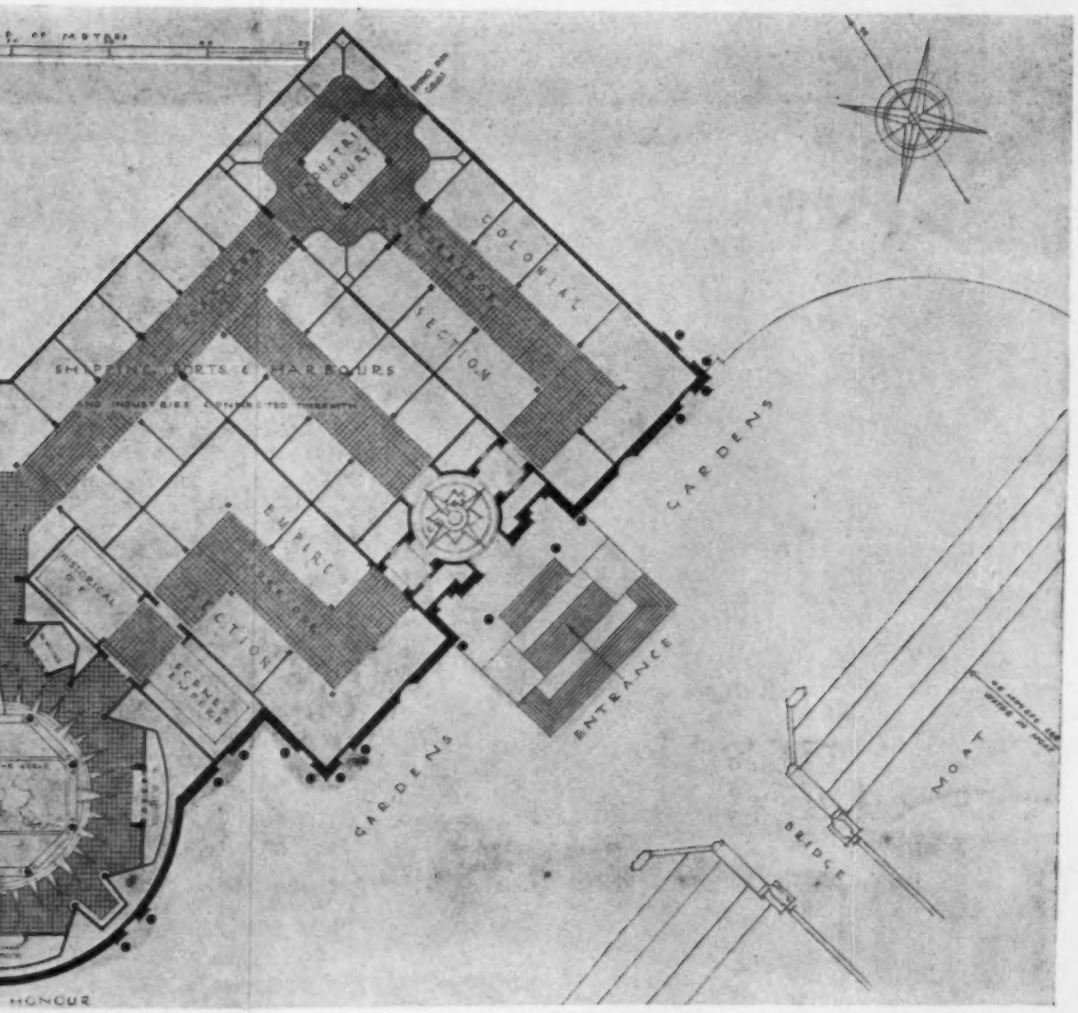

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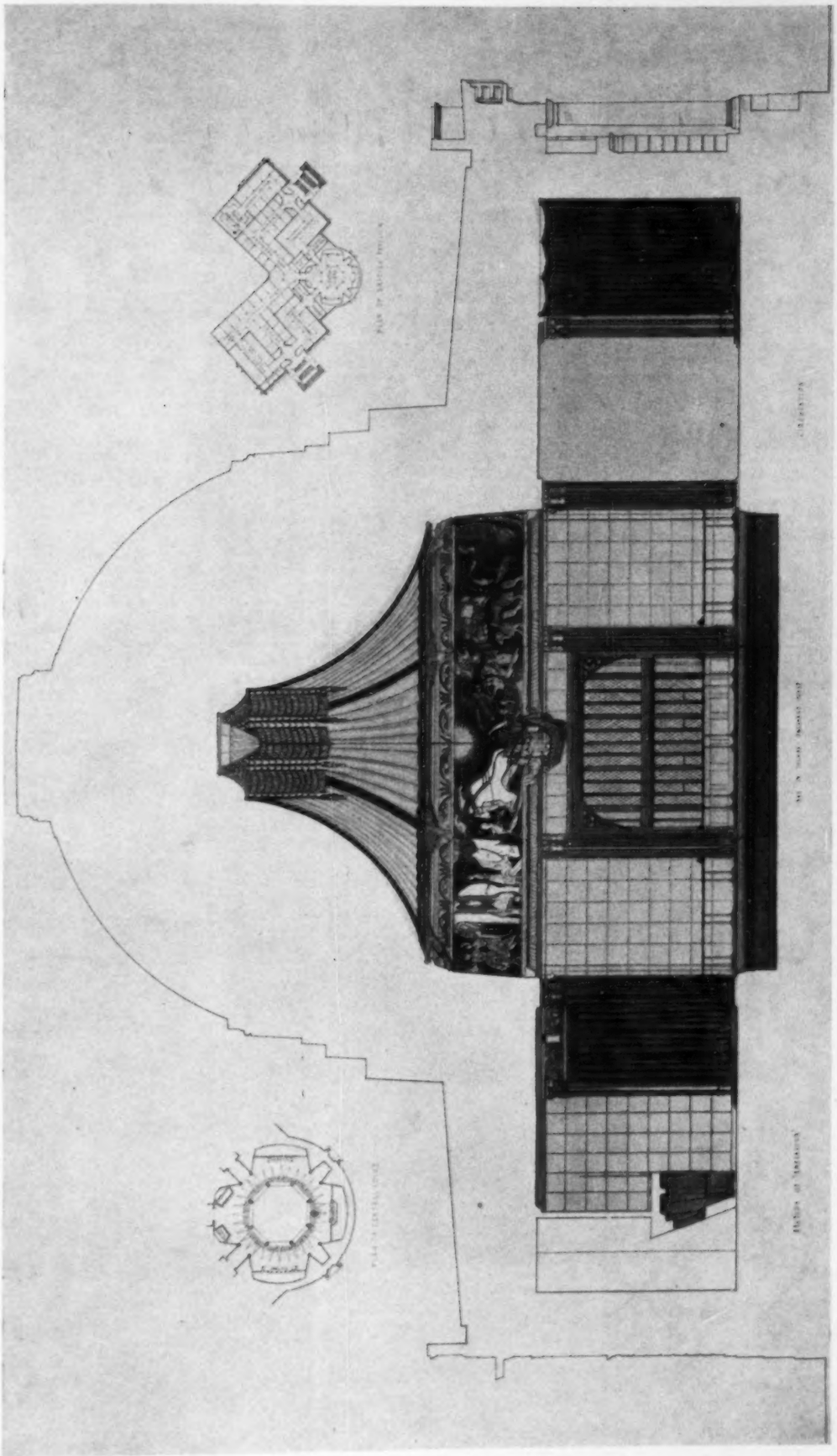
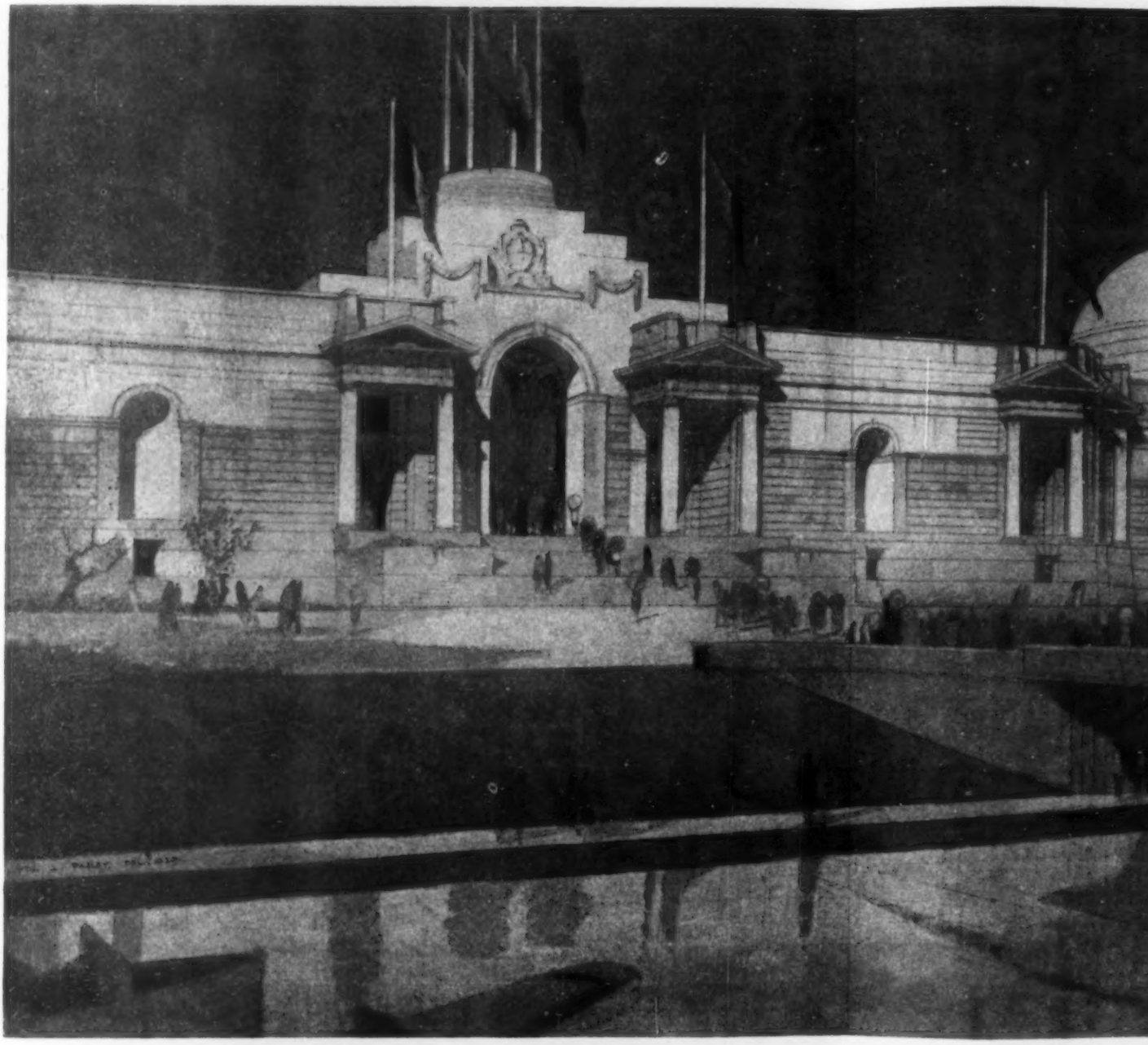


Antwerp International Exhibition, 1930: Section through Central Court of British Section.

MESSRS. RICHARDSON & GILL, FF.R.I.B.A., Architects.



Antwerp International Exhibition, 1930: British

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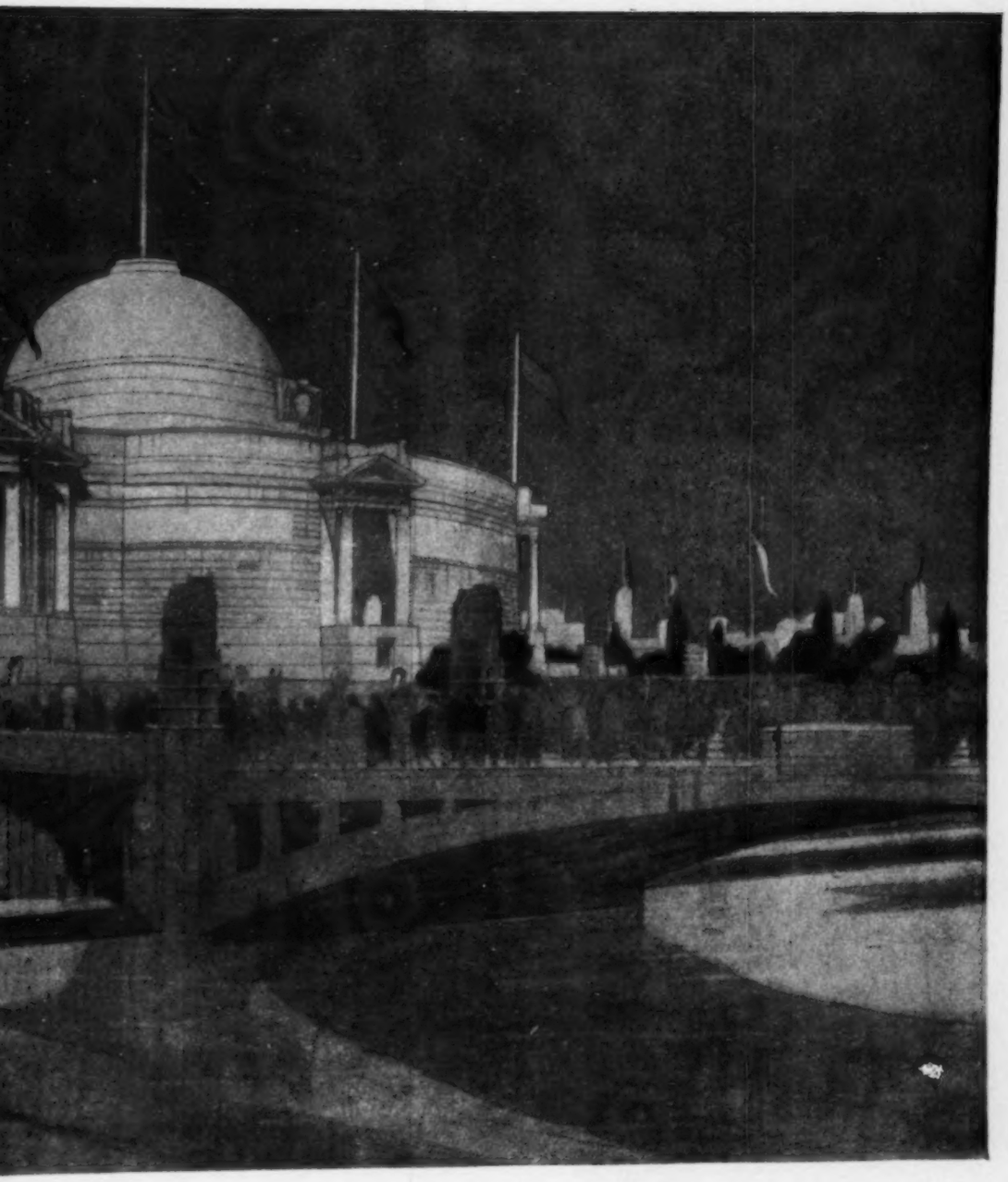

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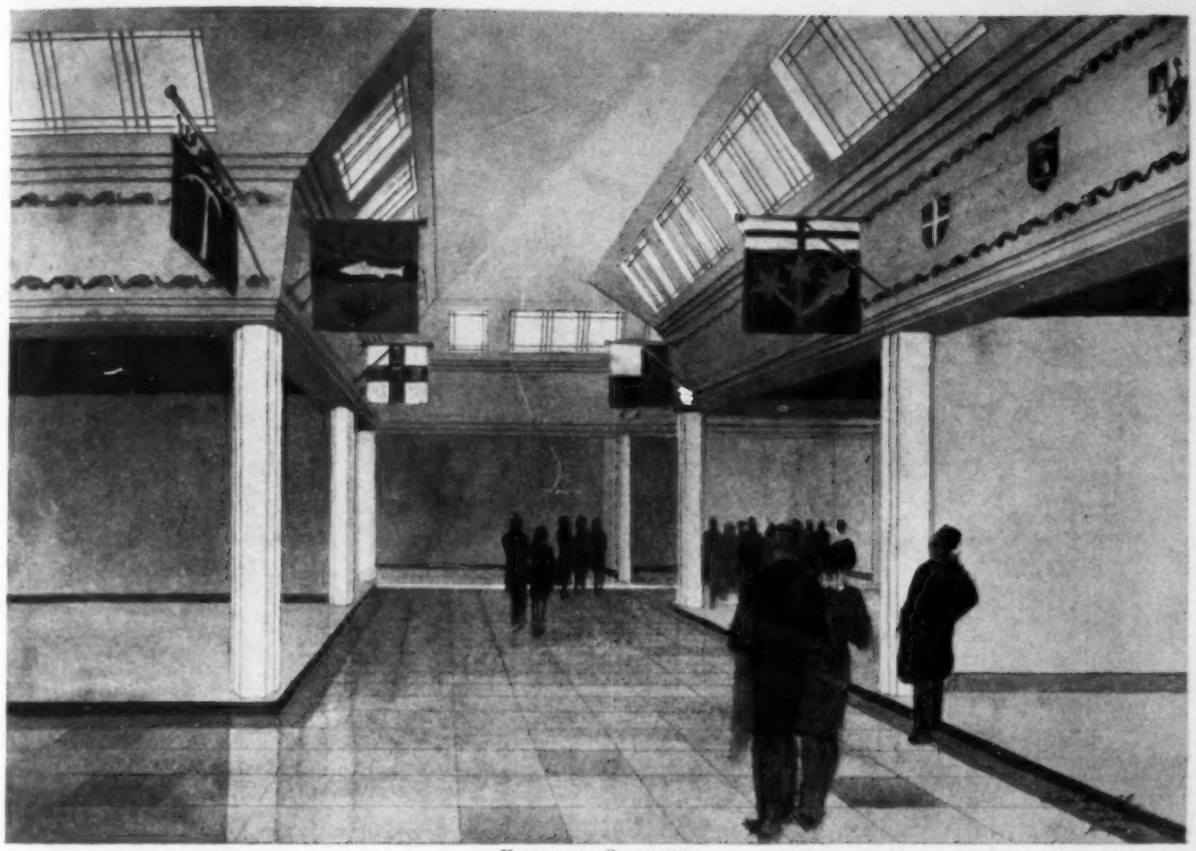
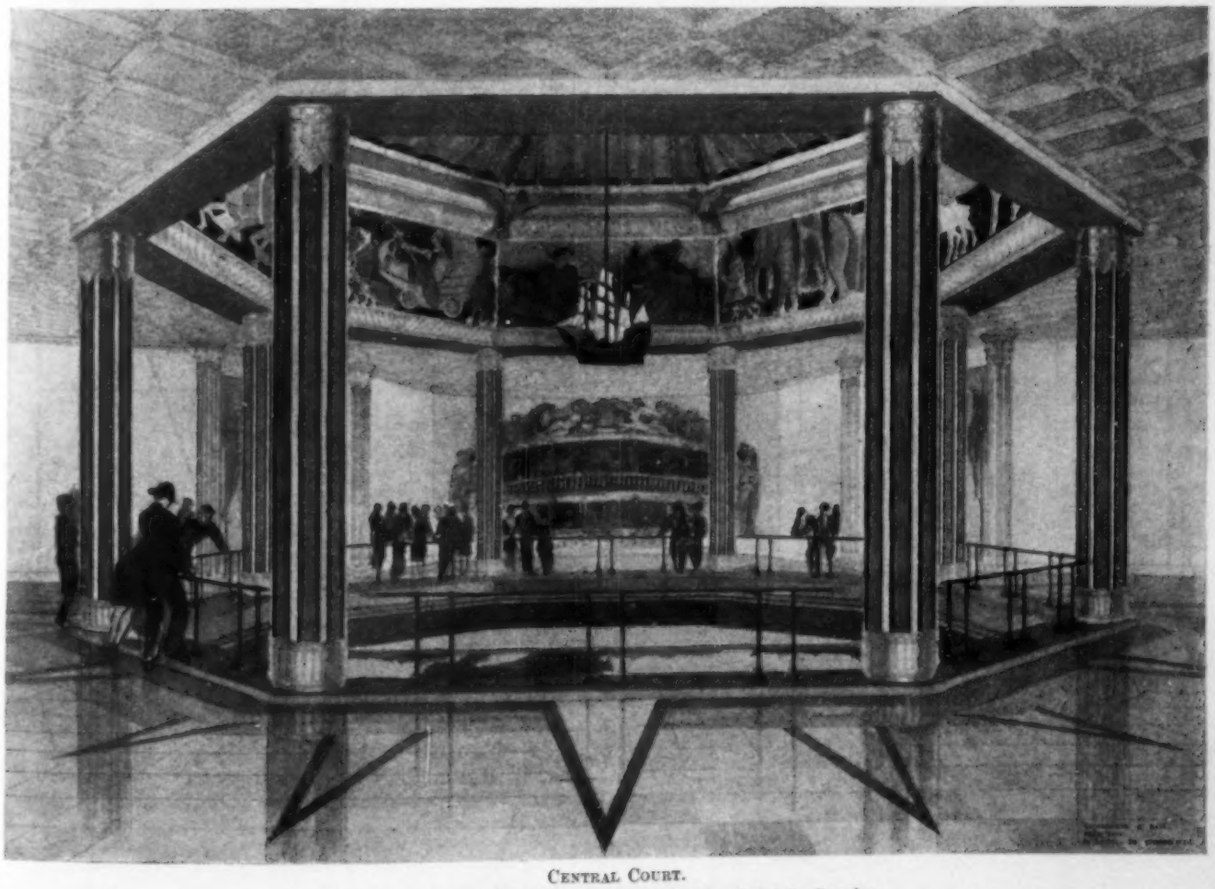


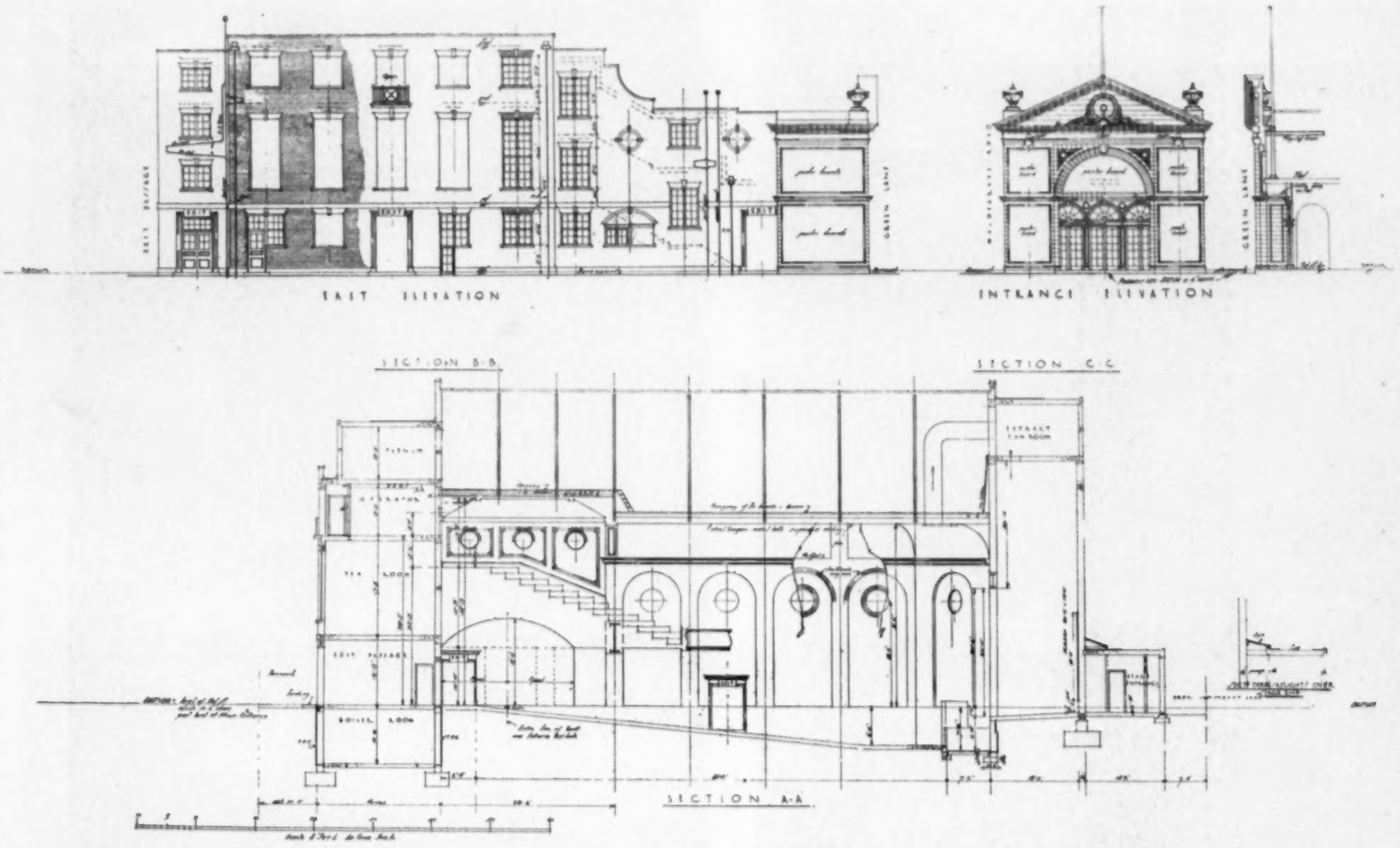
Exhibition Galleries.



Central Court.

Antwerp International Exhibition, 1930: British Section.

Messrs. Richardson & Gill, FF.R.I.B.A., Architects.



The Regent Cinema, Becontree.

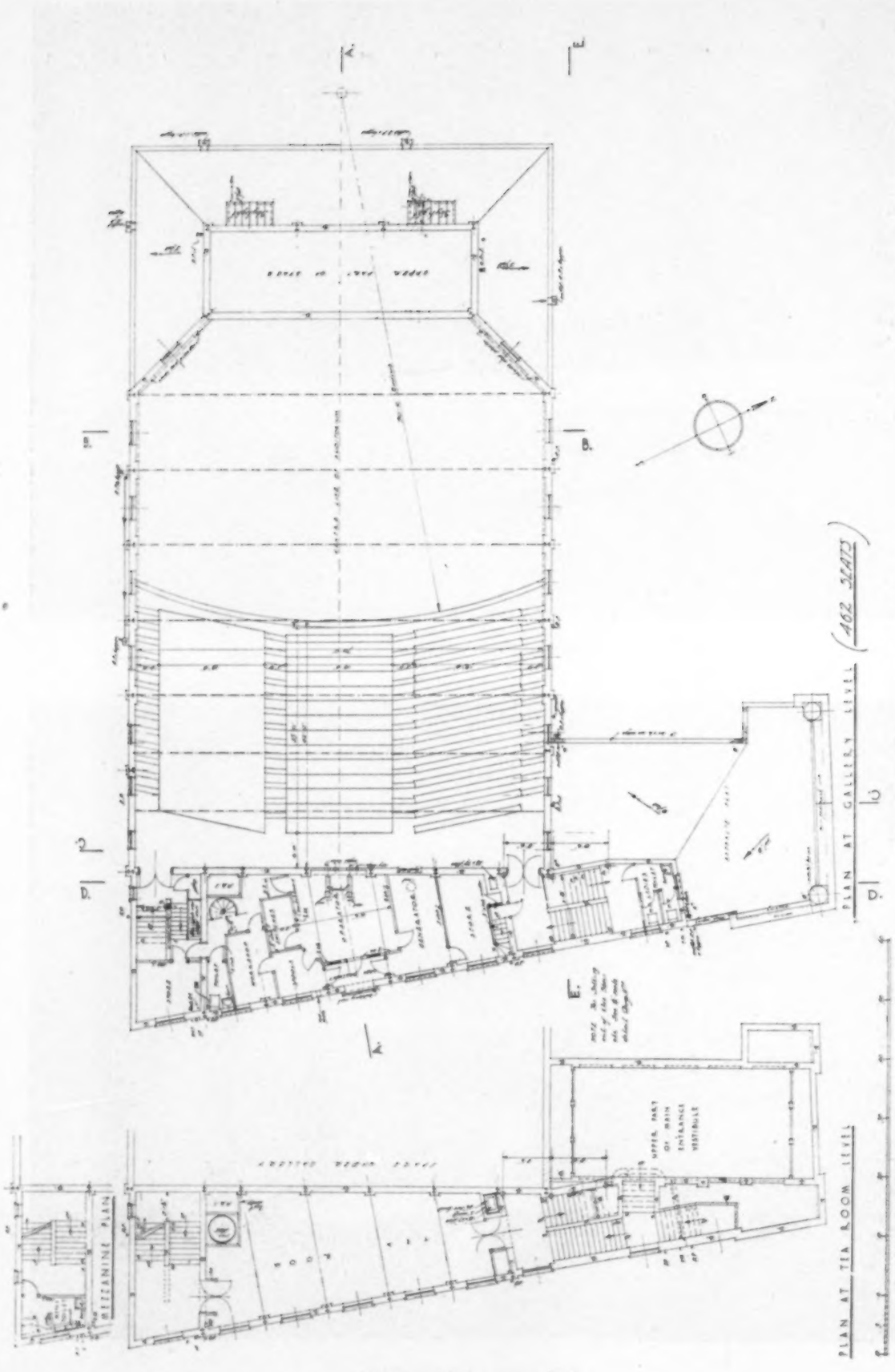
MESSRS. LEWIS SOLOMON & SON, FF.R.I.B.A., Architects.

General View of Auditorium.

View Looking towards Stage.

The Regent Cinema, Becontree.

Messrs. Lewis Solomon & Son, FF.R.I.B.A., Architects.



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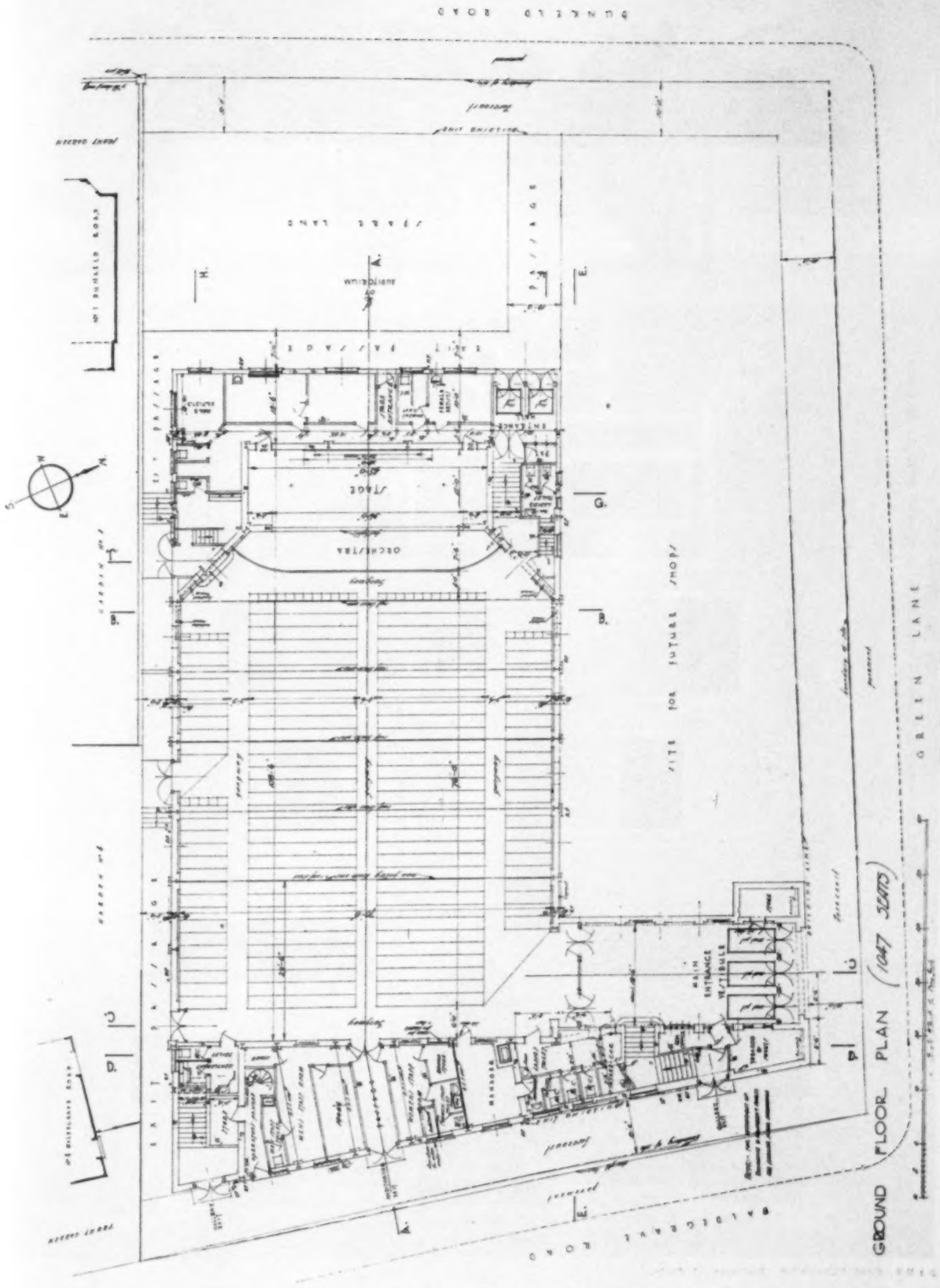

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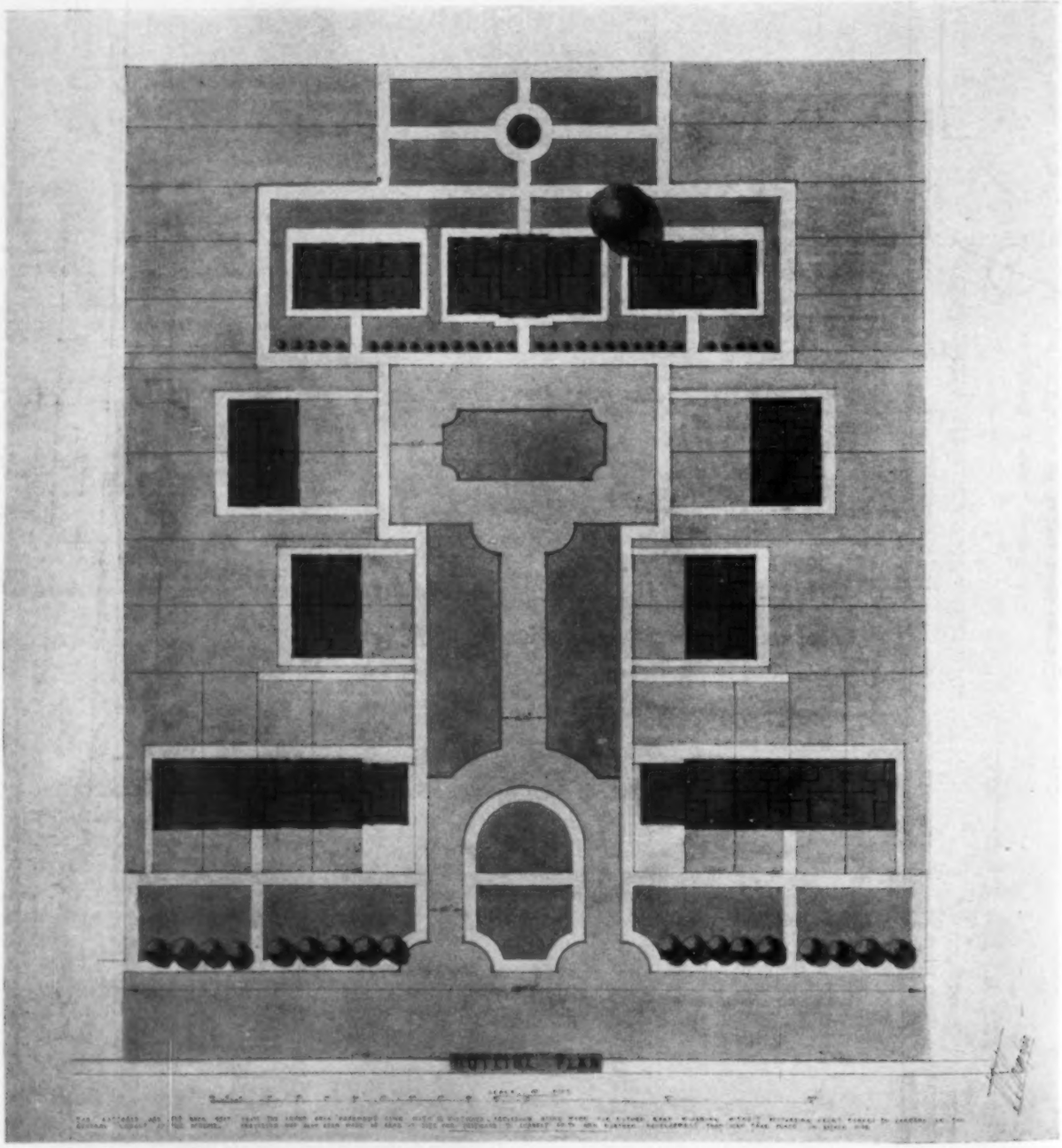
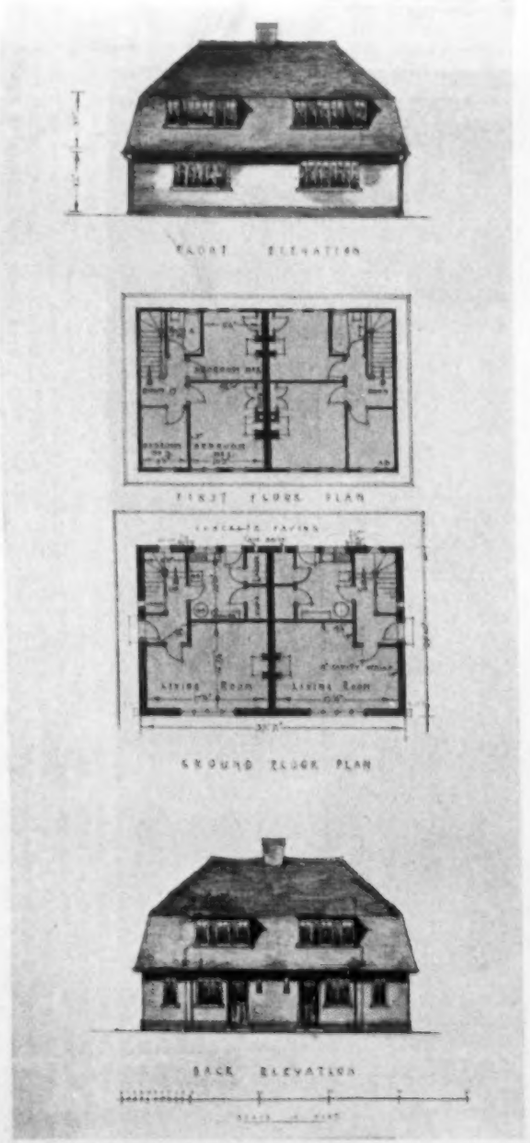


R.I.B.A. Final Examination: Testimony of Study.

Design for a Small Housing Scheme in a Mining District of Kent.

By Mr. W. Thompson.

(Published by arrangement with the Board of Architectural Education.)



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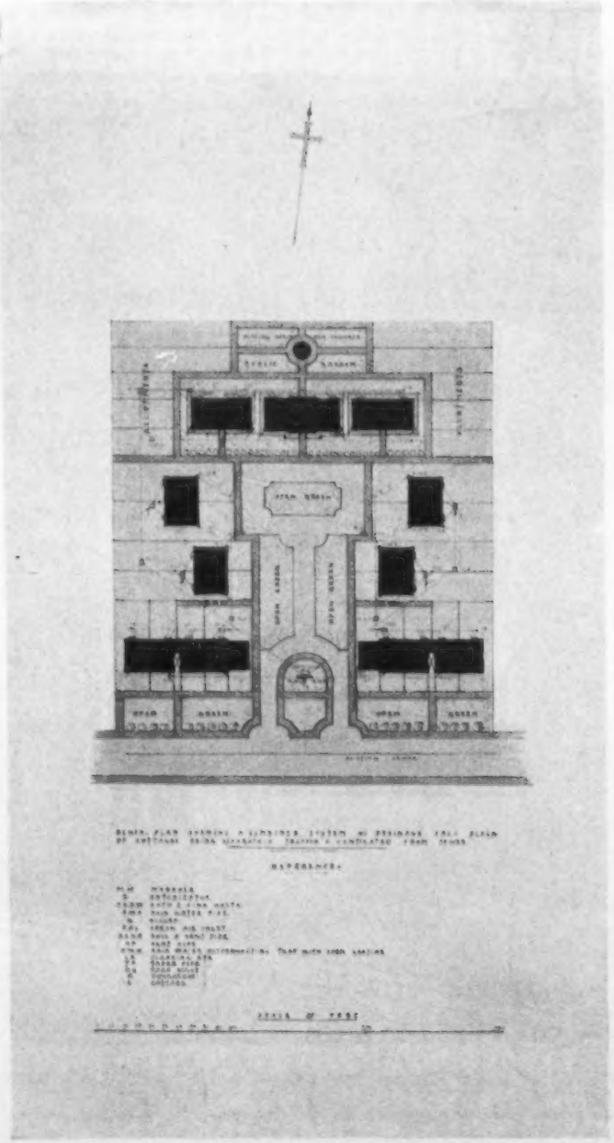

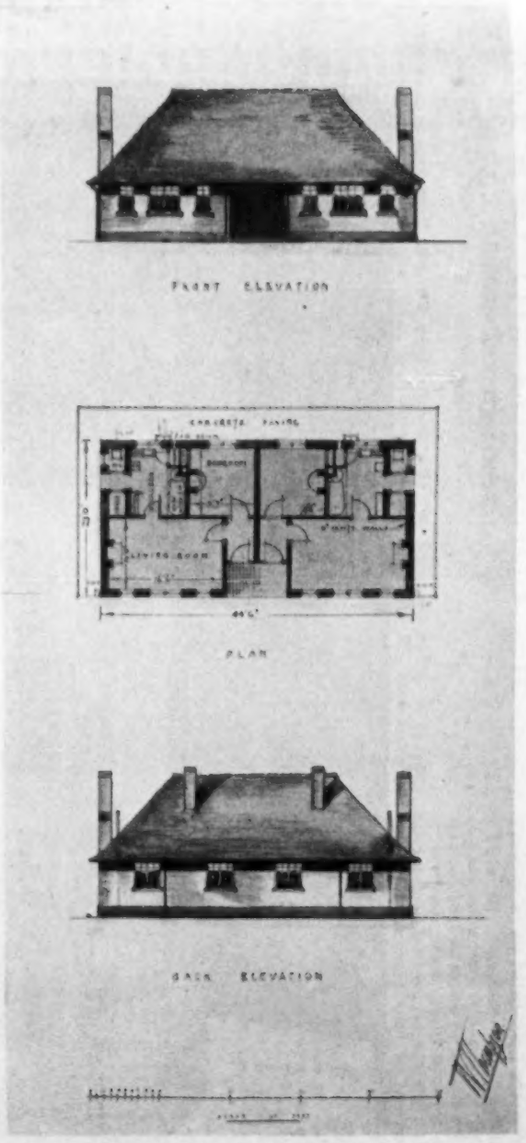

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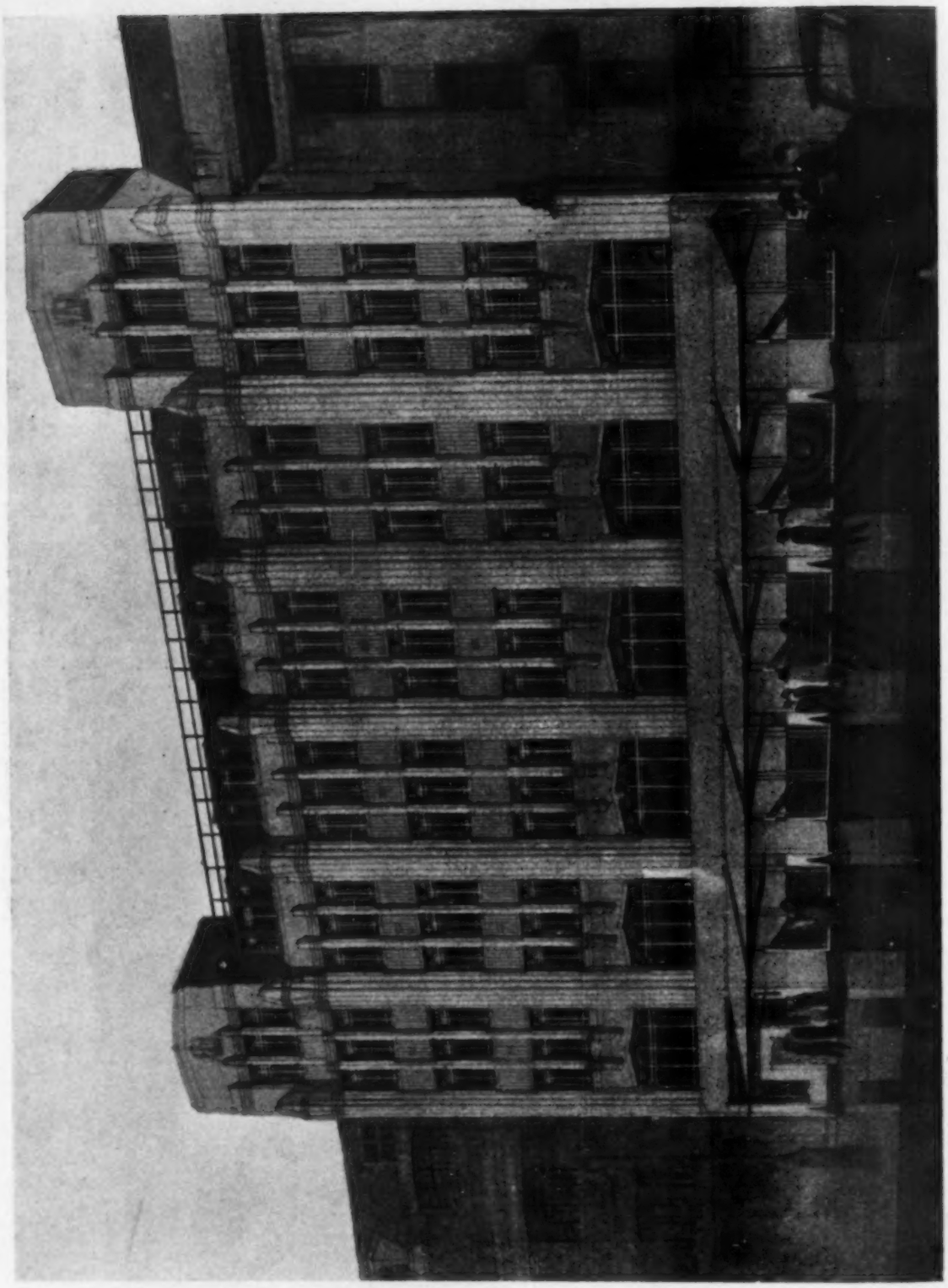

New Premises, 2, 3 and 4, Dean Street, Soho.
Messrs. North, Robin & Wilshon, Architects.

ART AND THE COMMUNITY.—II.

DESIGN AND STRUCTURE.

By W. R. LETHABY.

Our words are so way worn that it is quite difficult to pass thoughts from one mind to others, when they involve the use of such words as art, design, and architecture. Here I want to consider what we should properly mean by those much-discussed words "Art" and "Design."

In regard to the first, we have several words which are at least related: labour, work, art. At times these three words meant much the same thing, but in the last few centuries they have acquired marked distinctions. "Labour" has taken on burdensome implications; "work" is drab, dreary, and dumb; "art" has become pretentious, affected, and remote. Now I want to suggest that the less we divide off and isolate the notion of art from the related words "work" and "labour," the better it will be for both art and us. It would be a great pity if an arrogant claim to superior dignity should injure art itself. There is danger that when unrelated to its base in service that it will become freaky and trivial, when not worse. High art might become so very "high" that it would need to be disinfected. Crude labour, some will wish to say, cannot be art. But why crude? If we want to split every work word into two halves, we *can* separate the drudgery of washing doorsteps from the "art" of it, but I believe it is confusing to do so. Washing doorsteps should not be crude, it should contain its own ideal and be done rejoicingly. Every work so done, in varying degrees, embodies mysteries, skill, power, serenity, rhythm, beauty, sacredness. Art is complete or joyous labour, humanised toil, work—religion By narrowing and specialising our views of art we are necessarily restricting the fields of its application. If art is a generally reasonable service, then people will see that they need it. If, on the other hand, we teach them that it is a bogey mystery which they cannot understand, and that Mr. X and Mr. Y are needed to explain what it really is, then people will more and more draw back into mere commercialism. Having contracted the notion of art into oil-paintings and sculpture, we seem at the present time to be trying to squeeze it up further into a few paintings, some chunky carvings, and a special kind of very black woodcuts. Here, it seems to me, are simple alternatives: we must universalise the notion of art or compress it to extinction. On the one hand, art will come to an end in some superb sculpture, a huge quarry block plus two or three strokes which we are told are masterly; a supreme painting purely "æsthetic"; or one wonderful woodcut, black all over except for a subtle touch in one corner. Or, on the other hand, it will again broaden out from use to use so that it will be everywhere The effort of artists, it seems clear, should be directed to showing that they provide a reasonable service. Those are the alternatives: Art has to be thought of as a mysterious phenomenon, insight to which is granted to a few geniuses, or it is complete and worthy labour. All employers and spending bodies should understand that by their demands they are either encouraging reasonable forms of labour and promoting or retarding civilisation, or the reverse.

In this aspect of things I should like to discuss the relation of Government departments, Corporations and Churches to the forms of labour they have fostered during the last century: demands for labour are impositions of forms of culture. It seems to me a tremendous thing that hundreds of millions should have been expended on works tricked out in the sham styles with so little contribution of truly human interest. In all our Church buildings, great and little, which have been anxiously wrought from designs in the "Gothic style" made in London, it is difficult to find one single work of art. This "demand" by organised bodies is of vast importance in civilisation. We have thought far too much about "design," and far too little about the results. The means have eaten up the ends. It is true that in the word "design" there is an association with drawing, but this is accidental; much of the most delightful of even ornamental arts has been the result of working without drawings. Design is inherent in any work properly done, from cooking and sewing to painting and sculpture. The work is the thing, design is the preliminary thinking about it. We should all agree as to the importance of appropriate and reasonable design for every kind of workmanship. In regard to building, the danger seems to be on the other side of the road. We have thought of design for architecture as a mystery and have been too anxious about it as something strange and remote. It would be better if we did not look on it as a separate problem, but as just an essential part of doing things, inseparable from the work. All the art genius's fine talk and frenzy about it comes to this: Design is arranging how work shall be done. This being so, I will set down what I suppose to be half-a-dozen of the main sources from which we may draw suggestions in designing buildings. The most important consideration is the work as a whole, the thing, the structure, that it shall be serviceable, suitable, excellent. In some arguments such data are sometimes pushed aside as "merely utilitarian"; but up to a point, a long way on, that says no more than "merely right." This thought of purpose and excellence may itself suggest little refinements; instruments and engines are usually beautifully finished. High utility requires exquisite adjustment and fitting. Structure is such a supreme consideration in regard to the building art that I shall return to it again later. A second great base of design is found in the selection of appropriate materials and bringing out their qualities in right and natural ways.

A third source of design is found in the ways of workmanship. A design should not be an abstract thing, a whim which is imposed from above, but it should spring up and expand in and through workmanship. We should aim at sound forms of work rather than at showy shapes. The greatest snare is the attempt to look grand. Pre-eminently is this true of everything "ornamental." I wish I could explain clearly why this must be so. Every "ornament" is a matter *of choice*: it shows what we *like*, and thus tells what is in our minds. All the ornaments on the frontages of Holborn and the Strand have come out of people's minds!

A fourth way of preparing for design is to look at Nature with the thought of gathering suggestions. Nature is so infinite in extent and variety that the first landscape view of it is most confusing. You will find, however, by practice, that a multitude of suggestions will arise by looking at Nature with a constructor's and designer's eyes.

A fifth and certainly the main method in actual designing is in carrying on custom with a difference. Get into the habit of thinking variations and improvements of things you have seen. All the best design in the world has been done by adaptation and improvement.

Sometimes, and rightly, we praise originality, but consider what may be meant by the word. There is the wanton would-be originality of whim, and there is the true originality of orderly advance. True originality is reaching out from the sphere of the known to that which is to come next. The greatest originality is a new step in the common way.

A sixth element is experiment and exploration. This indeed is self-evident, but it is not so clear that design should be conceived as finding rather than willing—the discovery of an inevitable right solution.

Then my "seventh lamp" of design is economy. Economy is part of perfection. It does not tolerate waste or inefficiency, bungle or botching. This point calls for specially careful consideration, as our ways of education quite naturally lead to the association of "architecture" with grandeur, extravagance, and luxury.

One thought which I want to get especially clear is this: The idea of ideal structure is different from what we usually think of as construction. This "Building Construction" of the books is the means of putting together our designs, however unintelligent and unstructural they may be. Structure, on the other hand, is a living process leading forward to perfection: it is a principle akin to natural laws. The ideal of the building art should be to develop organic structures expanding from within like natural processes of growth. The results should be energetic, elegant, economic. Finish, fairness, intelligibility must be put in place of "style." Such a view of structure should open up a way for high ambition.

We must put structural ability in place of showy, misleading drawing; doing work in place of designing; the idea of elegant economy in place of grandiosity. Our architectural elevations are too often affrontages to our intelligence; exercises in the imposing. Architecture is the art of building, especially the art of building nobly and well. We have marred it all by making it so strange and scarce; we must attain to an idea of sacredness in common building. Stern reality would bring back mystery to our art once again. Ah, the arguers will say, reverting to our usual word confusions, "When all this is done the result will be purely mechanical." To be purely anything serviceable would be a gain; modern architectural work in the styles is far less than mechanical in human value. The mechanical properly understood is a revelation of law and mystery. There are differences in the mechanical according to its objects; it can hardly be as worthless and basely mechanical as the "ornaments" which we plaster over our constructed designs. A "mechanism" that is framed for a noble end partakes of the spirit of that end.

A clock, telescope, fiddle, harp, boat, cart, balance, plough, crane, water-wheel, lighthouse, bridge, and such like things are mechanisms, but they are deeply poetic at the same time. The Forth bridge has the romance of sternness, stress, and adventure. Poems might be written on it, but our sham Gothic churches will not inspire any poetry except of a pathetic kind. The word mechanism should not be used with the implied qualification of vile. Old cottages, hayricks and cowsheds were built from the point of view of service and economy. Everything which is human and real is penetrated by the spirit of art and poetry; it is sham, shoddy, and pretence which are the enemies. Besides, I want to save money from mechanical ornaments and spend it in personal works of art. In these "æsthetic" arguments utility also is always spoken of slightingly. Now "mere utility" may mean such beautiful things as a sheaf of corn, a barn, a ship. The really utilitarian house, chimney, and roof, if we could find out how to build them, would hardly be less artistic than the ship or the loaf of bread. In any case it would be silly to go away from the perfect types for taste's sake, and so set up indigestion. Building, we are told—"mere building"—is not this wonderful thing architecture. Our architecture I readily grant is different from but less than building, when it gives us the imbecilities of our streets. As soon as may be we have to set about the long-delayed task of finding out how to build perfect utility-buildings. I can conceive of a house being such a perfect organism responding to given conditions that it would become a type like a ship; every part would have to be exactly so as in a watch. Would it not be distress-

ing, we may ask, to have houses all alike from Newcastle to Dover?—but that would not follow. Varying conditions would result in constant modifications; utility and reason would cause the solutions to differ from town to town and even from street to street.

. . . . . .

There are rumours at the present time of things being done in France, Germany, Sweden, and America, and there is some fear of our being swept along in another style "movement." I greatly fear a modernist fashion which will be imported as a style and not arise as a natural growth from our own sound building customs. "Modernism" as inverted archæology is quite a different thing from experimenting for ourselves and being modern. We have great natural gifts of our own, but our method is wrong.

To be definite and practical and not vainly stir up a cloud of words has been my desire. I have not been systematic, and certainly not exhaustive, in what has been suggested regarding design. If, however, the problem of building design were approached by some such ways as have been outlined, it may not be doubted that results would soon be very different from those which are with us in all the streets of all our towns. Certainly, the word "styles" should never, as St. Paul, or someone else, says, "be so much as mentioned among you."

TWELFTH INTERNATIONAL CONGRESS OF ARCHITECTS

The Twelfth International Congress of Architects will be held in Budapest—the capital of Hungary—from September 7 to 14, 1930. The work of organisation is being conducted at the Society of Hungarian Engineers and Architects (Budapest, IV., Reáltanoda-u. 13-15). According to present indications it is expected that architects from all parts of the world, representing many nations, will meet in large numbers, and already a great many enrolments have been received at the offices of the Congress. Amongst others, Professor Ragnar Ostberg, of Stockholm, has announced his intention to be present, and he has also declared his readiness to take part in the International Exhibition of Architecture, which will be held in conjunction with the Congress, by exhibiting the plans of Stockholm Town Hall.

At the request of the executive committee entrusted with the preparations for the Congress (under the direction of Messrs. Robert Kertész, Under-Secretary of State, president; André de Virágh, former Under-Secretary of State, managing president; and Adalbert Rerrich, High Commissioner of the Government, general secretary). Count Kuno Klebelsberg, Minister of Culture and Education, has decided to award prizes consisting of one gold medal, two silver medals, and three bronze medals for the International Exhibition of Architecture. The committee has also decided to erect a statue in memory of Edmond Lechner, the great Hungarian architect. This statue will be unveiled in Budapest next September, during the Congress.

Art in the City.

At a recent meeting of the Corporation of the City of London it was resolved, on the motion of Mr. William Foxton, that "in order to harmonise and bring into effective relationship any work, or the acquirement of any specific article in which design, form, colour, fitness, and artistic merit is an important consideration in connection with the activities of the Corporation, and to remove the chaotic policy now existing, it be referred to the special committee to consider and report as to the best means of dealing with such matters in the future."

THE THAMES VALLEY*

We venture to predict that this book will appeal to a much wider circle than that usually concerned with regional surveys, for at least two reasons, namely, that the Thames Valley offers a subject of more than ordinary interest, and that this subject is here dealt with in an exceptionally illuminative manner. The introduction by John Buchan is historical in its scope, and, whether all his statements are accepted or not, is in a very readable form. The other contributors set forth very clearly the present condition of the river and the description is copiously illustrated by drawings, photographs and maps. Starting from Cricklade, the highest point at which the stream is regarded as just navigable for small pleasure craft, almost every feature of the scenery down to Staines is mentioned. The bridges receive careful and critical attention, and the other features—some good and some bad—are reviewed.

Plans of riverside towns and villages enable us to realise their place in the past and present economy of the Thames Valley—Wallingford, with the lines of the Roman Camp still clearly defined, Abingdon, Henley, and other "bridge-head" towns, later in their origin but all of them important in mediæval times, when the Thames was a dominant highway, roads being few and bad.

The earlier chapters are mainly descriptive, with a view to giving a vivid and definite impression of the river as it is at the present time, with its characteristic beauties, but not overlooking defects when they occur, such as ugly railway bridges and other detrimental features. We find that the region is fortunate in possessing many by-ways and footpaths from which excellent prospects can be obtained, and though most people are now content to see the country as it flashes past their motor-car, there are still a number who find a journey on foot more satisfying. One of the chief interests of the Thames lies in the variety of the scenery, which is due to the fact that, starting on the gentle eastern slope of the Cotswolds, it meanders through comparatively level country until it meets the outlying hills south of Oxford, and then cuts the main escarpment of the Chilterns at Goring; from here onward to Staines the hills, now nearer, now further, alternate with the levels and afford a very varied prospect.

All this is clearly shown on the excellent maps, but it is not their main purpose. They are here to explain the proposals for a beneficial zoning of the Thames Valley, and to define which areas it is important to preserve from spoliation, either by securing them as public open spaces, as private open spaces, or as rural and agricultural areas. These different classes are recommended to suit varying requirements. The permanent national possessions need not in this case be extensive, provided the private open spaces can be made equally secure, while where the preservation of the amenities will not preclude some degree of development the land scheduled as "rural" will admit of farms and other dwelling-houses with an average curtilage of not less than ten acres, and "agricultural" with a land unit of not less than three acres per house. These latter, while not ensuring the exact preservation of the existing landscape, would usually prevent it from being materially changed

An important section of the book is that dealing with Roads and Bridges, which reviews the proposals which have been made, approving some and condemning others. Perhaps the most important decision is that which pronounces the destruction of Marlow Bridge unnecessary. Though this bridge will not take the heaviest vehicles, it is not part of a main traffic route, and there are other alternatives. If the case for a stronger bridge could be proved, the better course would be to build a new bridge below the lock and by-pass Marlow High-street. The proposed bridges and by-passes at Maidenhead and Eton are both difficult and somewhat costly, and it is claimed that the schemes should be carefully analysed before the final decisions are taken.

To review all the questions dealt with would not be practicable, as the report is very comprehensive in its scope, although the authors recognise that the subject deserves to be treated even more fully, and in the closing chapter refer to this survey as a basis for "concrete and practical proposals" for carrying on the work under the auspices of the Thames Valley Branch of the C.P.R.E.

Proposed Hotel, Worthing.

Worthing Licensing Justices on Wednesday granted a provisional licence for a hotel costing £250,000 to be erected on the Marine Parade, to be known as the Hotel Majestic. There are to be 195 bedrooms with bathrooms attached. The architects are Messrs. Elcock & Sutcliffe, 60, Strand, W.C.2.

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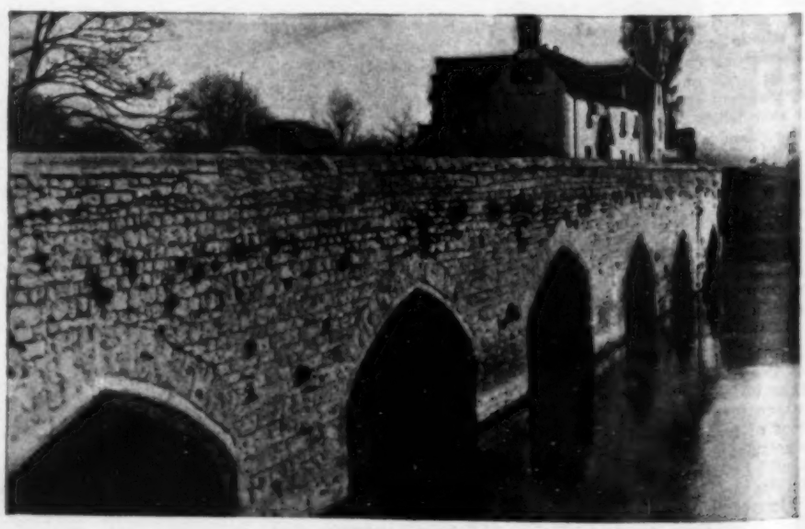
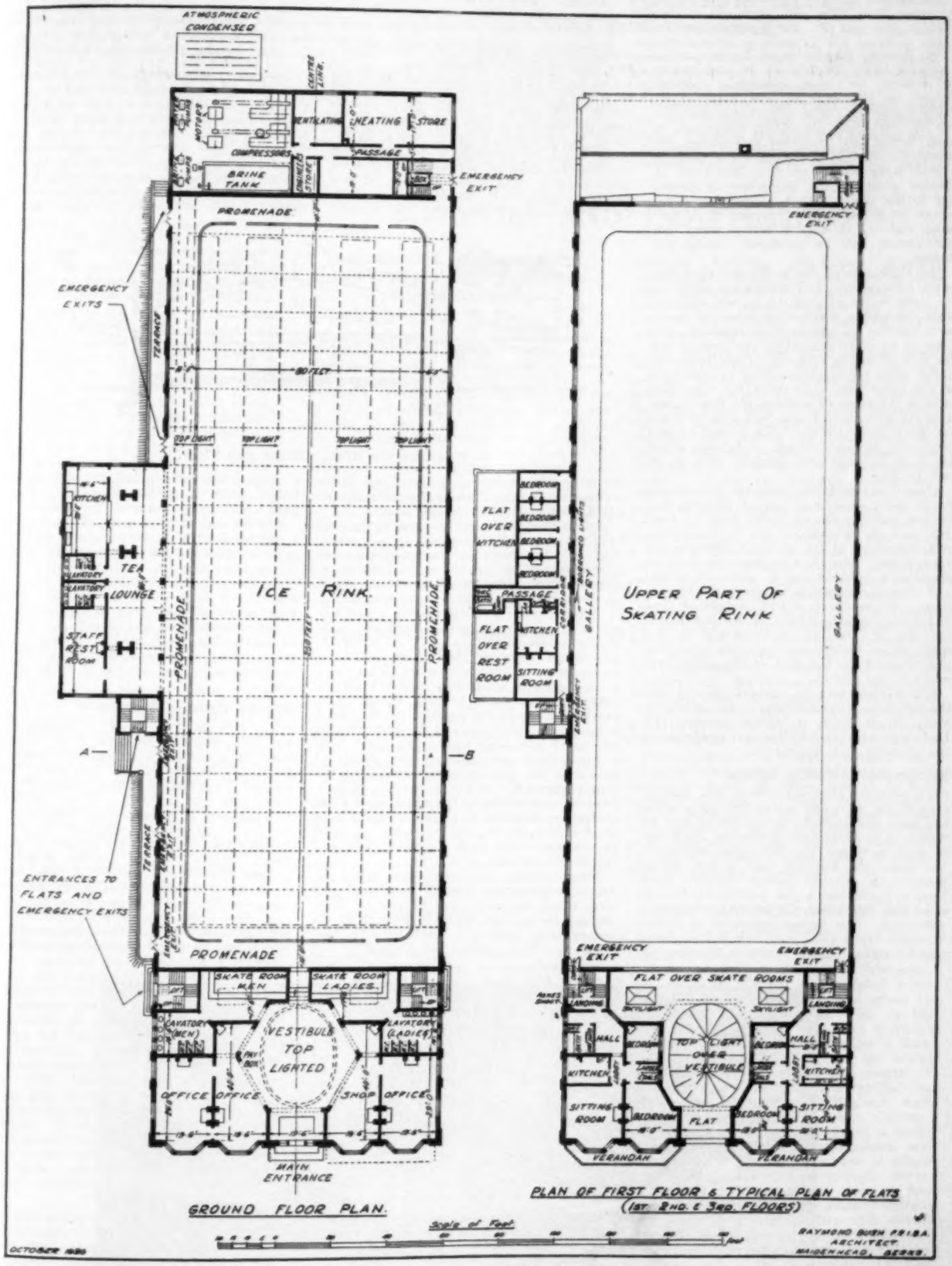
* "The Thames Valley from Cricklade to Staines." By the Earl of Mayo, S. D. Adshead, Patrick Abercrombie, and W. Harding Thompson. With a Preface by John Buchan, M.P. (University of London Press, Ltd.) 15s. and 21s. net. 1929.



Abingdon Bridge (Northern Portion).

(From "The Thames Valley from Cricklade to Staines.")



Proposed Ice Rink, Offices and Flats.

Mr. Raymond Bush, F.R.I.B.A., Architect.

THE MODERN ICE RINK

By RAYMOND BUSH, F.R.I.B.A.

The growing popularity of figure skating is causing many inquiries to be made as to the reason for this apparently sudden impulse on the part of the populace to gyrate upon the practically frictionless surface of real ice, describing sequences of loops, curves, and countless and almost imperceptible changes of "edge." The pleasure to both body and mind that this form of exercise gives to the performer is known only to the skater. Prevail upon any man, woman, or child to put on a pair of modern skates and try it, and in almost every case that person will be numbered among the skaters.

The conditions of life to-day are such that to the average man and woman the taking of the older forms of exercise is very difficult, often impossible. Mechanical means of movement envelop us almost to suffocation, and those of an older generation particularly feel the lack of bodily exercise. Flesh begins to gather with its accompaniment of weariness of the spirit and a yearning for something to take the place of perhaps the now impossible old push-cycle which once took us down the lanes, and with which we walked up and down the steeper inclines, a process which for both business and pleasure kept us fit and healthy.

These facts and the enormous attendances at all three sessions of the at present very limited number of ice rinks, both in London and the Provinces, are in themselves sufficient proof of the increasing demand for more rinks. The ice rink has now won its place as a medium for a blend of mental and physical exercise in most pleasurable form. No sooner is a rink completed than it becomes overcrowded. A further reason for this is that all participating in this sport do so under conditions that enterprise and research on the part of specialists have made nearly perfect.

The subject may be divided broadly into the following four headings:—(1) Refrigeration; (2) Hygiene, including warming; (3) Lighting; and (4) Architectural treatment of the planning and decoration.

Refrigeration of Skating Surface.

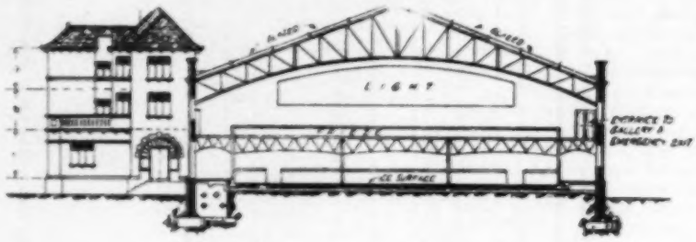
To attempt anything like a full description of the ways and means used in creating the hard and mirror-like surface of real ice would be to enter upon a treatise. Sufficient it must be to say that by rapid evaporation (or what the scientist calls "low boiling point"), a suitable element converts itself from a liquid into a gas, performing this by absorbing the heat from the surrounding substance. This heat is measured in British Thermal Units (B.T.U.s), one B.T.U. being the amount of heat necessary to raise the temperature of one pound of water one degree (Fahr.) when at 39 degrees.

The above natural phenomenon can easily be traced in the following description of the refrigerating plant. The refrigerant used in these installations is usually ammonia (NH_3), which has a boiling point of minus 28 degrees Fahr. at atmospheric pressure, this temperature being 60 degrees below freezing point (Fahr.). The plant consists of the following units:—(1) Ammonia compressor; (2) Water-cooled condenser; (3) Electric motor or other driving power; (4) Brine cooling tank; (5) Brine pump; (6) Brine piping under the floor of the rink.

The outline of the refrigerating cycle may be given thus. The ammonia in a gaseous form is compressed by the compressor to approximately 150 lbs. per sq. in.; thence it passes to the water-cooled condenser where its temperature is reduced to approximately 77 degrees (Fahr.). This cooling whilst the gas is at a high pressure changes the state of the ammonia from a gas into a liquid. The liquid ammonia then passes from the condenser to an expansion valve. This valve is of a pattern which only allows a minute quantity of ammonia to pass through. On passing this valve the pressure of the liquid is immediately reduced, and it is thus enabled to expand and again change its state from a liquid to a gas. During the process of expansion the gas evaporates and takes the heat required for its transformation of state from its surroundings. For example, if ether alcohol or ammonia be placed on the human hand it evaporates, and in doing so takes the necessary heat from the hand, thus leaving the hand cold.

After passing the expansion valve the ammonia gas passes through a series of grid coils which are submerged in a brine tank. During its passage through these coils the gas expands, causing a great drop in temperature. This compels the transfer of the heat in the brine to the ammonia gas in the coils, and the continuous process thus reduces the brine to the low temperature required. After passing through these coils the gas is drawn back to the compressor and the same operation is repeated continuously.

When the temperature of the brine has been reduced to about 18 degrees Fahr. it is circulated by means of a large centrifugal pump through a network of pipes which are embedded in the concrete floor of the rink. The cold brine thereby cools the concrete surrounding the pipes, which in turn freezes the water which has been sprayed over the floor. After performing this duty the brine returns to the evaporator or brine tank at a temperature of approximately 20 degrees Fahr., which is a difference of 2 degrees from the ingoing brine.

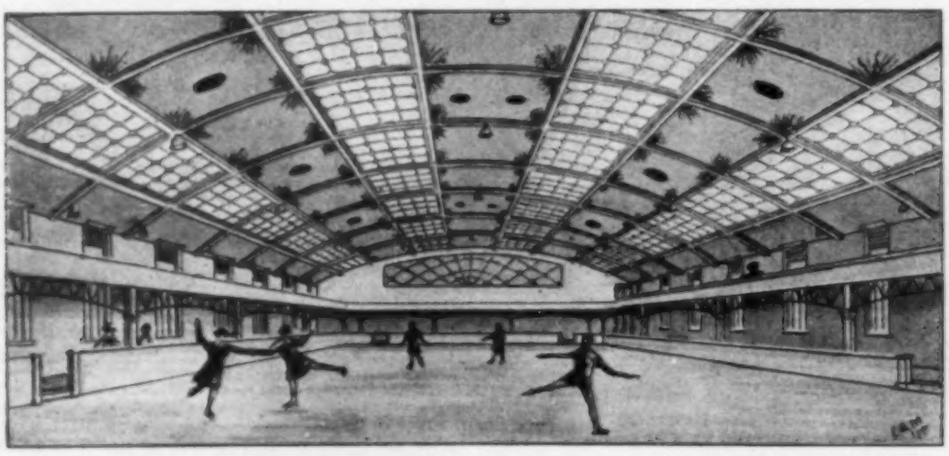


Proposed Ice Rink, Offices and Flats.

The amount of brine pumped per hour for a rink of 250 ft. by 80 ft. would be 36,000 gallons. Allowing 1.2 for the specific gravity of the brine together with the above difference, the estimated number of B.T.U.s extracted per hour would be 864,000. Therefore the actual work done by the compressor is approximately 70 tons of refrigeration per 24 hours. The above method of freezing ice skating rinks is the most simple and effective and assures a fine surface of pure natural ice.

Hygiene, including Warming.

The rink being a centre of vigorous exercise for persons of all ages, much attention has been given to its atmospheric condition. From the section of the machinery house marked "ventilation" this important question may be noted. From here all vitiated air is continuously extracted by means of electrically operated extractors. These keep up a continual stream of extraction through the air outlets which are merged into the decoration of the ceiling. Each of these air outlets is so controlled automatically that the stream of air passes out with equal volume per unit of time through each outlet. Thus one portion of the upper layers of atmosphere cannot get



Interior of Rink

From a Drawing by Mr. Raymond Bush, F.R.I.B.A.

a greater rate of extraction at the expense of its neighbours. The volume is constant through each one.

Similarly there is introduced at the necessary points and at the necessary heights, having regard to the gravity of the atmospheric gases, air that has been filtered and conditioned and adjusted at such a temperature that it shall immediately distribute and circulate itself all about and over the rink. In the rink illustrated it is calculated that the air shall be completely changed six to twelve times per working hour. In addition to this the air will be further freshened by the infiltration of ozone. The piping for this will form a string moulding with outlets where required about the rink. This introduction of ozone is electrically accomplished by the splitting up of the atmospheric oxygen. The rejuvenating effects of ozone are well known, long journeys often being made to coastal resorts in pursuit of the benefit it confers on flagging energies.

With regard to the warming of the rink, it has been found that the employment of heating media around the boundary barrier of the ice surface has had an unsatisfactory influence upon the skating surface in close proximity, and this has presented a problem of some magnitude. A new scheme to overcome these difficulties has been decided upon, namely, the fitting at suitable intervals along the main wall, well set back from the ice-surface area, of electric tubular heaters, thermostatically controlled, so that a predetermined degree of radiated warmth may be maintained and cannot be exceeded. In addition to this, or alternatively, warmth may be diffused by means of thermal storage electric water heating, also thermostatically controlled.

Lighting.

During daylight hours the rink will be lighted by means of glazed panels through the ceiling, from the glazed portions of the roof. There is also an ample provision of fenestration for the promenades and galleries. The illumination of the rink by night is disposed so as to afford an even distribution of artificial daylight of sufficient intensity to supply amply the requirements of rapid movement and without any impediment of glare or shadow. There are in suspension from the ceiling, at suitable intervals, 28 special "Geco" reflectors, fitted with 1,000-watt Osram lamps. These reflectors are fitted with strips of morocco diffusing glass. Thus will a flood of evenly diffused and glareless light be extended throughout the length and breadth of the rink, including side promenades and galleries.

Architectural Treatment.

The skating rink and its appurtenances bid fair to fill the place in European communities that was taken by the old thermæ in Roman times as the foregathering ground for exercise, pleasure, and the business of daily life. These thermæ had, it will be remembered, the palatriæ, or grounds for running and exercise; the Laconicum or sweat bath, a heated chamber; porticoes for conversation, and many appurtenant departments which varied with localities and requirements. Nothing was spared to make these colossal buildings inspiring by beautiful architectural treatment. Dress showed off well, and individuals looked their best in the setting given by this environment. The life that went on within those walls no doubt was a sort of club life, conducted perhaps on a communal basis.

Ice rinks, as regards planning, have already been discussed as much as is possible at a stage of small-scale preliminaries. The lay-out can undergo much amendment and can vary according to local requirements. The skate rooms, for example, will have to be enlarged, and some further requirements added, in order to cope with the large and still increasing numbers that attend the rinks. The public come from a radius of 30 miles and more to attend the large rink at Richmond, Surrey.

In the building illustrated another purpose has been held in view in addition to that of recreation. It has been noticed that children and other young people, without effort, become bi-lingual, and very often tri-lingual, when in the company of peoples of other countries engaged in sport or play, and it is hoped that a means may be developed of instruction in skating and in Continental languages at the same time. Living accommodation can be combined in the superstructure over certain portions of the building. Such residential flats are intended primarily for the professional officers of the rink, who will be of various Continental nationalities. In any case, these superstructural sections of the building can provide a much-needed housing accommodation, and, as such, there need be no question about their being bespoken.

Where possible, and where suitable terms can be obtained from the local electricity supply company, the flats are intended to be all-electric. Fireplaces and flues will be constructed, but all will be plugged for power.

SOCIETIES AND INSTITUTIONS

ASSOCIATION OF ARCHITECTS, SURVEYORS AND TECHNICAL ASSISTANTS.

A successful smoking concert was held by the Metropolitan division of this Association on Friday evening, January 17, at Carr's Restaurant, Strand. A feature of the evening was an enjoyable musical programme, including a dramatic sketch, all arranged for by the chairman, Mr. Reading. During the evening an interesting account was given of the Continental tours which are organised by the Association and have become part of its activities. Special attention was paid to the visit to the Rhineland and Luxemburg, and particulars were given of the tours arranged for this year—one to give an opportunity for study of modern architecture in Holland, and another to the southern provinces of France and across the Pyrenees to the ancient cities of northern Spain. A large gathering of members and friends included many ladies.

ILLUMINATING ENGINEERING SOCIETY.

In the course of a paper on "The Art of Stage Lighting," given before this Society on January 21, Mr. C. Harold Ridge said the general tendency was for simpler architectural forms, having good acoustic properties, and he would like to note in passing that acoustics might now be considered an exact science. There was the probability that in the future the proscenium frame would be modified or even abolished, thus, with the diminishing taste for realism, allowing better contact between audience and stage. The abandonment of realistic production had resulted in elaborate experiments on the Continent, and to a very limited extent in America and England.

It might be imagined that the stage machinery which served the old realistic melodrama and the like was no longer necessary, but, on the contrary, it was now of the greatest use for scene-shifting and scene-building purposes. With the newer three-dimensional plastic settings, quick changes were only possible with some form of rolling or wagon stage, or other machinery, unless a very large staff was employed. The tendency for the proscenium to disappear and for the actor to return to the old fore-stage once more had resulted in the lights coming forward also, and nearly all theatres nowadays were using projectors in the auditorium. It was to be hoped that architects would make proper provision for these, so that they could be decently concealed, though it was significant that among the advanced theatre directors there was an ever-growing feeling against any kind of "illusion" in production.

Another general tendency was to provide as part of the general design some form of permanent background to the stage, which could be flooded with light or have projected upon it some design, and thus do away with the old back drops, with the painted landscapes and false perspectives, and especially with the overhead borders. Such backgrounds, known as cycloramas, artificial horizons, sky-domes (Kuppelhorizont) and so on, had been used in Germany and elsewhere for years, and in the first instance were designed for purely realistic effects—skies with moving clouds and similar natural phenomena.

The lighting should serve as the handmaid of the theatre and should be subservient to the action of the play and the art of the actor. It was very desirable, therefore, that both the master electrician and the producer should have the necessary training and ability to co-ordinate the lighting with the various other factors in a production so as to achieve an harmonious whole. Under the long-run system prevalent in the West End of London there might be good reason for sticking to the traditional form of closed-in stage with its borders overhead. But should we ever build a National Theatre, or should the Bill at present before Parliament enable municipal authorities to run theatres, he hoped that the open type of stage would be used.

In conclusion, the lecturer said the existing methods of switchboard control were imperfect for the following reasons:—(1) The so-called pre-set boards only allowed the pre-setting of switches and not of dimmers; (2) the mechanical interlocking of dimmer controls by master levers did not allow of movement at different speeds and in opposite directions, which was so necessary when using any system of colour mixing.

The switchboard controlling modern stage apparatus should fulfil the following conditions:—It should (1) Allow control by one master electrician; (2) allow instantaneous silent "black-outs"; (3) allow dimmers (in every circuit) to be so controlled that any given number of them could be operated together at different speeds and, if necessary, in opposite directions.

WEST YORKSHIRE SOCIETY OF ARCHITECTS.

At a meeting of this Society at its Leeds headquarters, held on January 30 (the president, Mr. G. H. Foggitt, in the chair), a lecture on "Scottish Castles" was given by Mrs. E. M. W. B. Hughes, who, in the course of her remarks, said that although there were no actual Norman castles in Scotland, they undoubtedly formed the model for such as were built in the reigns of Alexander I and David I, and recalled the larger castles of France and England, such as the Chateau Gaillard Loches, Conway, and Carnarvon. As an example of a castle of that period, Bothwell, Lanarkshire, was not only one of the finest, but one of which the most extensive remains existed. First, there was a great courtyard, more or less rectangular, surrounded by a massive curtain wall, often 40 ft. in height, with round towers at the corners and machicolated cornices above. The donjon or keep was a round are fitted with strips of morocco diffusing and it was not only the main point of defence, but also the centre of domestic life; it had no communicating door from the exterior, the only means of entry being on the first floor by means of a wooden drawbridge.

In the great hall the lord of the castle, his family and retainers slept—generally upon heather or straw laid on the floor. These buildings must have been extremely draughty and cold, the windows being too large to keep out the cold winds, and too small to let in the warmth of the sun. No furniture existed, except a chair for the lord, and trestle tables and benches for the rest. As an instance of the manners of that period, it was not considered etiquette to use more than the thumb and two first fingers in conveying food to the mouth. Garde-robes existed in the thickness of the walls, and Bothwell Castle showed evidences of an interesting method of flushing the drains of these conveniences—otherwise, rules of hygiene were non-existent. As time went on, greater accommodation was provided in the form of a number of private rooms, a kitchen, a wine cellar, chapel, and other offices.

Artillery then came into existence, and, times becoming more peaceful, the defensive features of these castles died away, and the architecture assumed a more domestic character. In Stirling Castle there were very distinct traces of a connection with France, and particularly in the influence of Italian workmen from Fontainebleau. At Falkland there were distinct Renaissance details to be seen on the façades, while at Linlithgow, with its strongly marked string-courses and internal corridors, they felt they had passed into another period. The lecture was accompanied by numerous slides of plans, elevations and sections, explanatory of the photographic representations of the castles, and at its conclusion the lecturer was accorded a hearty vote of thanks.

In the discussion which followed, Messrs. G. H. Foggitt, J. Addison, G. L. Broadbent, and J. W. Lee, amongst others, took part.

ESSEX, CAMBRIDGE AND HERTFORDSHIRE SOCIETY OF ARCHITECTS.

The annual dinner of the Southend Chapter of the Essex, Cambridge and Hertfordshire Society of Architects was held at Southend on Thursday, January 23. Mr. George F. Grover presided, and among those present were Sir Charles Nicholson (Past-President of the Society), Alderman W. Miles, Mr. J. P. Sargent (Director of Education), Mr. A. J. Lamb (President of the Southend and District Law Society), Mr. F. Wykeham Chancellor (President of the Essex, Cambridge and Hertfordshire Society of Architects), Mr. A. J. Arnold, Mr. Ian MacAlister (Secretary, R.I.B.A.), and others.

Mr. J. P. Sargent, proposing the toast of "The Royal Institute of British Architects, the Essex, Cambridge and Hertfordshire Society of Architects, and the Southend Chapter," said that one contact which he had with the profession was in connection with the Education Committee's School of Art. He had friends who were architects and who were rather apt to turn their noses up at schools of art and architectural departments; there was a feeling that they were too academical. If there was any such tendency, the committee had taken an important step during the past year to correct it and had appointed an advisory committee in connection with the department, and many architects were members. The object was to advise the Education Committee from time to time as to the best means of ensuring "that the instruction given and the equipment provided for the department should be adapted to the requirements of the profession." Sir Charles Nicholson had consented to act as chairman. It always seemed to him, continued the speaker, that the future amenities of this country were more in the hands of the architectural profession than, perhaps, we always recognised. If 100 or 150 years ago there had been a body which enjoyed the prestige and public esteem which the R.I.B.A. enjoyed to-day, and they had seen the blots of the industrial revolution developing, they would have been able to rise and appeal to the public conscience and save us from many of those blots which were the breeding ground of social and economic difficulties of the present time. We were still in the process of what was called urbanisation. Towns were spreading out into the country, and the time was not far ahead when wherever we looked our eyes would fall, not on the beauties of nature, but on the work of men's hands. He saw in the R.I.B.A. and Chapters our only safeguard that the errors of 100 years ago would not be repeated.

Mr. Ian MacAlister, responding, mentioned that 90 societies were in alliance with the R.I.B.A. He sometimes thought that the architectural profession, with the possible exception of the engineering profession, was the only really indispensable one. The R.I.B.A. was an influential body, but the value of its work would be next to nothing without the work that was being done for it all over the country and Empire by its Allied Societies. The central body in London could meet in committee and send out letters and circulars, but it could not do much unless in every centre devoted and public-spirited men were willing to turn their theoretical work into practical results. He was glad to think that the work of those societies all over the Empire was getting more and more efficient.

Mr. Grover, replying for the Southend Chapter, referred to the fact that Southend was responsible for the inauguration of the Society embracing the three counties of Essex, Cambridge and Hertfordshire. Fortunately, the local Society and the counties' Society had been favoured with presidents such as Sir Charles Nicholson and Mr. Wykeham Chancellor, and it was largely due to them and Mr. Martin Kay that it had been so well founded and was likely to be a success.

Mr. Wykeham Chancellor, proposing the toast of "The Mayor and Corporation of Southend," said there was one attribute which a Mayor and Corporation should be possessed of in an eminent degree—the subtle sense of artistic balance which ensured a power of discrimination in all matters relating to the well-being of the town, more particularly with regard to the erection of buildings and their suitability to their environment. The speaker went on to refer to the spoliation of the countryside, an evil which was, he said, becoming so serious a menace that unless something was done to counteract its ravages the rich heritage which we now possessed would be irretrievably lost. He would like to draw attention to the growing disposition of public authorities to evince a disregard for the retention of old buildings of archæological and architectural interest, especially when they interfered with road widening operations.

Alderman Miles, replying, said he was bound to say that he knew of nothing which the Corporation had done in any matters affecting the architectural profession which called for their generosity or approval, with the one exception of the restoration of Prittlewell Priory, a work of which even the Corporation of Southend might be proud. He did not know why they were so kindly disposed towards the Corporation. Architects used to have a chance of work from the Education Committee, but a little while ago they decided to install their own architect, so architects were shut out there. Might he suggest to their Chapter that it was about time they took notice of what was going on in regard to buildings erected in that town? They had to face the provision of a town hall, and he had been astonished that the architects had not had discussions on the matter and sent representations to the Corporation. He would like the Chapter to link up with the Corporation, and an association such as that might enable them in the future still to say, "Southend, after all, is a beautiful city."

Councillor O. H. Cockrill, A.R.I.B.A., proposed the toast of "The Ladies and Visitors."

THE COLLEGE OF ESTATE MANAGEMENT.

Lecturing at the College of Estate Management, Lincoln's Inn Fields, on January 23, Mr. Frank W. Hunt, C.V.O., F.S.I., F.A.I., discussed compensation arising in respect of street widening and improvements under the powers conferred upon local authorities by the Public Health Act, 1925, under which, he said, there was no limitation as to the time in which a claim for compensation for injurious affection, owing to the prescription of improvement lines, could be made. On the other hand, in the Roads Improvement Act and the Housing, Town Planning Act, 1919, there was limitation, and while compensation in respect of land was, in case of difference, referred to an official arbitrator under the Acquisition of Lands (Assessment of Compensation) Act, 1919, it was not clear that a difference in regard to injurious affection under the Public Health Act, 1925, could be heard before the official arbitrator. Certainly the Public Health Act, 1925, did not expressly refer a disputed case to him. If that view was correct, then the measure of compensation should be the difference in the market value of the property before and after prescription of the improvement line. The Public Health Act, 1925, however, gave special direction to the arbitrator to take into account any undertaking offered by the local authority, and such undertaking must be embodied in his award. That was a deviation from the usual course in ascertaining compensation and such deviation might be symptomatic of the change in the attitude of Parliament towards certain of the compensation cases. There occurred to the speaker, on consideration of the provisions of the Act, the thought that two arbitrations in respect of the same property, and, in the event of one view of the statutes being correct, before different arbitrators under different legislation might result in a local authority having to pay more than the real value of the land and the other compensations properly due. In this connection he instanced the gradual widening of Fleet-street, the City Corporation having served notices on individual owners of properties as occasion arose. He thought he was within bounds in saying that in nearly every case, apart from the purchase for the value of the land taken for the street, there was a claim made, which in most cases received some consideration, in respect of pushing the building back behind those on either side. Yet in a short time the next-door property was to receive the same treatment. He had not the slightest doubt that more compensation was paid for the widening of Fleet-street than need have been if some other expedient had been adopted. In the case of the Corner House in the Strand, the upper part of the main building was set back some distance behind the line of shop fronts, the line of the upper floor representing the ultimate widening of that part of the Strand. That expedient had been adopted as a means of avoiding heavy compensation.

ROMAN FAMILY LIFE.

Sir Banister Fletcher, P.R.I.B.A., lecturing at the Central School of Arts and Crafts on January 29, described the Roman circular temples, which, he said, were of peculiar interest to the whole Christian world as prototypes of the first Christian baptisteries, just as the Roman basilicas or courts of justice were probably of the early Christian churches. These were among the many instances in architectural evolution in which Christian forms were based on pagan originals, and they helped us to realise that architectural styles were not divided into watertight compartments, but were evolved one from another, according to the changing needs of civilisation.

Of all the circular temples in Rome the little Temple of Vesta had the greatest attraction for English people, as the symbol of that united family life which the old

Romans, like the modern English, regarded as the unit of the state. In its simplicity of plan, with its central altar-fire, it stood in the Forum Romanum at the centre of civic life, as a reminder of the sacredness of the Roman hearth, and its importance was intensified by the consecration of six "vestal virgins" to the service of the goddess. The convent-like building which housed them could still be traced, but of the temple little remained. Other little circular temples there were, most attractive in their plan and treatment—the Temple of Mater Matuta, in the Forum Boarium, the Temple at Tivoli, rising sturdily over the rocky gorge, and that at Baalbek, with its unique external design.

The lecturer then gave an exhaustive account of "the most majestic of all circular buildings in the world," the Pantheon at Rome, with its great expanse of dome open in the centre to the winds of heaven. Finally, he described the large halls or "basilicas" which, while housing courts of justice, served as rendezvous for business and consultation—the "Royal Exchanges," indeed, of ancient Rome.

COMBUSTION

SIR,—On reading the correspondence in your columns on "Combustion," one or two statements struck me as being incorrect, and I thought it worth while to refresh my memory on these matters. With regard to the statement made by "P Q. X." that CO_2 is a deadly poison, the more deadly by reason that it is colourless and odourless, I can only quote Partington's "Inorganic Chemistry"—one of the best works I know on the subject: "Carbon dioxide does not support respiration; animals die in it *from suffocation*, but the gas is not poisonous, and if oxygen is taken in time, recovery, with no ill-effects, follows." The meaning of the suffocation is, of course, the lack of sufficient oxygen for the combustion of the animal body—for life is merely a combustion process—its place being taken by carbon dioxide, a useless though harmless gas. In the same section we read that CO_2 has a pungent smell; the smell of a stuffy room or railway carriage surely confirms this.

The other oxide—carbon monoxide—is a hundred times more dangerous than CO_2. It has a very faint, peculiar smell, and it is given off by a gas burner owing to the incomplete combustion of the carbon through an insufficient supply of oxygen; complete combustion of hydrocarbons gives us CO_2 and H_2O, but incomplete $CO+CO_2+H_2O$. The effect of this gas is to form a compound with the blood—carboxyhæmoglobin—which is a very stable compound, and though oxygen may be applied for a long time, it is very hard to split it up, rendering the hæmoglobin of any use again. It is evident, therefore, that we should avoid both these gases, but especially this latter one, and for this reason Mr. J. C. Walker's statement that "in the case of gas burned in a correctly designed appliance the products are themselves unobjectionable" would seem to be incorrect. It certainly is misleading; Mr. Walker may say: "But I never said we had the correctly designed appliance." True, he did not; but if he has one, may I congratulate him on being the first man to discover 100 per cent. efficiency? Provided he has this apparatus, is it not subject to the ravages of age and misuse?

In 1921 a series of tests were conducted in the Mines Laboratory at Pittsburgh, U.S.A., and a report was published by the Technologic Bureau of Standards in 1922 on "Carbon Monoxide from Natural Gas Burners." An airtight room of 1,000 cu. ft. was used for test purposes, this being taken to represent an average kitchen, and a standard burner, using 8 cu. ft. of gas an hour, was lit, with a pan containing water placed 1 in. above it. At the end of one-and-a half hours, the percentage of oxygen was reduced from 20.9 per cent. to 18 per cent., and the carbon dioxide was 1.5 per cent. After 3.11 hours the flame went out, and the oxygen content was then 15.5 per cent. and the CO_2 3 per cent. The atmosphere also contained 0.16 per cent. of carbon monoxide, which is an extremely dangerous concentration. The water container was 1 in. above the burner, that being found to be the best position; nearer to it the efficiency is increased but the flame "floats," i.e., the utensil is in contact with the blue cone and the gases do not get enough oxygen. In this condition, carbon monoxide is given off in much larger quantities. Ventilation is not only desirable, as Mr. Walker states: it is essential.

I would like to mention that within recent years there has been a tendency for builders to cut down flues to a minimum size to suit gas-fires. This is a practice to be questioned; an obstruction might more easily occur in a flue of small dimensions; then again, if such gas-flues terminate in an air brick in the wall, there is a risk of down-blow, or if the very narrow partition between two gas-flues gets broken, as it may be, fumes from the gas-fire in one flue may percolate into the other flue and down into a bedroom. When we use gas, let us use it wisely. Evidently the public must use their own discretion, because the Building Acts do not as a rule refer to the construction of gas-flues; in fact, as far as the Building Acts are concerned, it would appear to me as if gas-fires could be used without any flue at all.

A. S. COCHRANE.

BOOKS

Foundations of Architecture. By MANNING ROBERTSON AND NORA ROBERTSON. London: Edward Arnold & Co. 3s. 6d. net.

There is no doubt that architecture deserves a place in the general education of the cultivated individual. The obvious questions that come to mind are: How much architectural knowledge is necessary, and in what form should the knowledge or education be presented? In this book the authors have chosen the method of analysing the elements of architecture in a manner that should appeal to young and old. They explain the qualities of a brick, a wall, a beam, or an arch, as solid units of which architecture is composed, instead of adopting the more usual method of teaching architecture as a list of dates and styles. They treat architecture as a living thing, and explain the principles of construction, as Professor Reilly says in his introduction, "as a motor engineer might explain a carburettor or a magneto to a beginner." In a sense, therefore, the various chapters could be said to form excellent lectures to be delivered to children at secondary schools; in another sense, the material is not so elementary that it fails to interest the professional architect. There is an intelligent discrimination between the true and the false in architecture, and within the limitations imposed by the size and nature of the book the authors have found room to touch upon a few matters upon which architects can possibly disagree.

It is, we believe, a very excellent object to try to teach the public to realise its responsibilities in architectural matters, or even to stimulate curiosity; and there can be no doubt that an intelligent interest is developed along with an understanding and appreciation of fundamentals. From this point of view, and upon these lines, the authors have produced an excellent little book which we hope will meet with success.

Stairbuilding and Handrailing. By JOHN F. DOWSETT, A.I.Struct.E. (London: The Library Press, Ltd.) Price 30s. net.

This treatise on handrailing may be said to be as complete and thorough a text-book as any aspirant for this specialised knowledge could wish to find. It is, however, assumed that the student has already acquired a certain experience at the bench and a knowledge of the construction of simple stairbuilding, for the main object of this book is to instruct how the rules of geometry are to be applied to the more advanced and varied problems of handrail design and construction. "There is always room at the top," but to the craftsman whose aim is to gain expert knowledge, there is scope for quick advancement into the grades where responsibility and initiative are demanded, with the corresponding return in a higher specialised rate of wages. The ambitious joiner would do well to study three-dimensional geometry and the principles involved in high-class geometrical handrailing as set out by the author in this volume, and so become possessed of that understanding which, when the opportunity presents itself, will enable him to take full advantage of the situation.

This compilation has been five years in preparation, and for a work of this class the price is not high, but we are pleased to see that to meet the convenience of the young student the publishers have arranged a scheme of deferred payments. The book is divided into two main sections: (1) stairbuilding, and (2) handrailing; the greater part being devoted to the more important study of every type of handrail and the examination of the more complex cases. It is important that the student should carefully follow each one of the detailed explanations given of the various types of construction, and to assist him in following the illustrations, which in this subject are as essential as the text, many of the most useful of them are reproduced on large folding sheets which open out on the table and can thus be examined alongside the written descriptions. The trouble of constantly having to turn to another page for the example referred to is thus happily avoided.

PROPOSED NEW HOUSING BILL

MISS SUSAN LAWRENCE, on January 15, received, on behalf of the Minister of Health, a small deputation from the National Union of Railwaymen. Mr. Cramp, who was the principal spokesman, said that railwaymen were faced with special difficulties as regards housing. Owing to regrouping, reorganisation of works, etc., and promotion, they were obliged to move over considerable distances, and in their new area they frequently found themselves unable to obtain suitable accommodation, either owing to shortage of houses or because the rents had gone up beyond their means by reason of decontrol.

Miss Lawrence welcomed the representatives of the Union. She said the difficulty fell into two parts. As regards rent restriction, the question of amending the Acts was admittedly urgent, but the subject was most controversial, and at the present time the congestion of the Parliamentary time-table presented an obstacle that was practically insuperable. As regards the provision of new houses, the Government were most anxious to see an increase in the number of working-class houses. A new housing Bill had been promised in the King's Speech and would shortly be introduced. There were also powers in the existing Act for drawing the attention of the Minister to, and securing action by, local authorities who failed to make a reasonable use of that Act. Any specific instances of difficulty which the National Union could submit to the Minister would receive his sympathetic consideration.

St. Ethelburga's Shops, Bishopsgate.

At a meeting of the Corporation of London the Finance and Improvements Committee brought up a report relative to the plan adopted last February for effecting an improvement in front of Nos. 70 and 74, Bishopsgate, and the porch of St. Ethelburga's Church. The shops were said to have existed before the Great Fire of London in 1666. The committee submitted for adoption an arrangement for acquiring the freehold interest of the Trustees of the London Parochial Charities in the shops for £4,000, subject to the consent of the Charity Commissioners. After considerable discussion the committee's report was carried by a large majority.

WEEK IN PARLIAMENT

WESTMINSTER, *Wednesday.*

Mr. Day asked the Minister of Health whether he could give the number of houses at present under construction or sanctioned under the Housing Acts of 1923 and 1924; whether he was satisfied with the progress of construction at present; and could he make a statement?

Mr. Greenwood said that on January 1 there were 25,096 houses under construction in England and Wales under the Housing Act of 1924, and 32,133 further houses were included in schemes approved for financial assistance under that Act. No houses completed after September 30, 1929, were eligible for financial assistance under the Housing Act of 1923. Considerable numbers of houses (38,298 during the last six months for which figures are available) of a rateable value not exceeding £78 (or £105 in the Metropolitan Police District) were, however, being erected without financial assistance from the State. The discontinuance of subsidy under the Act of 1923 led not only to an acceleration of building before that date but also to a consequent reduction in the number of houses being built after that date. Recent figures of the proposals submitted by local authorities showed, however, that the number of houses to be built was again increasing, and though he realised that the need for new houses had not as yet been met, he was not, in the circumstances, dissatisfied with the progress being made.

Imported Tiles.

Mr. Smithers asked if the number of imported tiles used on subsidy-aided building in this country in 1929 was known; and what action could be taken to ensure that only British tiles were used.

Miss Lawrence said that the reply to the first part of the question was in the negative. As regarded the second part, the Minister was sending the hon. member a copy of a circular which he had recently issued. The hon. member was no doubt aware that under Section 10 of the Housing (Financial Provisions) Act, 1924, the Minister was prohibited from imposing any condition which would prevent materials from being purchased in the cheapest market either at home or abroad.

The Slums.

Mr. Simon asked the Minister of Health whether, in view of the importance of concentrating all housing efforts in the removal from the slums of the poorer families who could not afford the rent of parlour houses, he would consider abolishing the subsidy under the 1924 Housing Act as regarded parlour houses.

Mr. Greenwood said he was anxious that great efforts should be made to provide better accommodation which would be available for poor families living in bad conditions, but he would not consider that the activities could or should at present be limited to this aspect of the housing question. There was a need for the building of more houses by local authorities apart from the question of dealing with slums. And while he thought that the greatest need was for houses of smaller type, he did not consider that local authorities should be debarred from building parlour houses or that subsidy should not be available for such houses in proper cases.

Rural Housing.

Mr. W. Taylor asked the Minister of Health to state what steps, if any, were being taken by the Ministry where rural authorities failed to provide cottages in rural areas.

Mr. Greenwood said the need for the adequate discharge of their duties under the existing Housing Acts was impressed upon any local authority if he had any good reason to think that they did not recognise it. The whole question of rural housing was under consideration in connection with the new proposals which he hoped shortly to lay before the House.

The Tied Cottage.

Mr. W. Taylor asked the Minister of Health if he would consider the question of removing the injustices of the present tied-cottage system by introducing a short Bill to place service tenants on the ordinary basis of the Rent Restriction Act.

Mr. Greenwood said this matter would be considered in connection with any legislation amending the Rent Restriction Acts, but it would not be practicable to introduce further legislation for this purpose in the immediate future.

Direct Labour.

Mr. Greenwood informed Mr. Wellock that the number of local authorities in England and Wales who were erecting houses by direct labour at January 1, 1930, was 47, and the number of houses which they had already erected or were erecting by direct labour at that date was 21,164. The figures for January 1, 1928, were 46 local authorities and 7,528 houses.

Fair Rent Courts.

Mr. McShane inquired of the Minister of Health whether, under the forthcoming Housing and Slum Clearance Bill, he would consider the setting up of fair rent courts.

Mr. Greenwood said that the setting up of fair rent courts would be an incident of rent restriction rather than of housing or slum clearance, and he had already indicated there was no possibility of introducing legislation for the amendment of the Rent Restriction Acts in the near future.

Unoccupied Houses.

Mr. Day asked for the number of London County Council unoccupied houses at December 1, 1929.

Mr. Greenwood said that the number of cottages and cottage flats on the L.C.C. estates on December 1 last was 37,353; 62 were unoccupied. Nearly all the unoccupied houses were in course of redecoration for incoming tenants.

The Unemployed.

Miss Bondfield informed Lady Astor that the following table gave the estimated numbers of insured persons in various branches of the building industry in Great Britain at July of 1928 and 1929, and the numbers of such persons recorded as unemployed in the last quarter of each of those years.

BUILDING INDUSTRY—GREAT BRITAIN.

Occupation.	1928.				1929.			
	Estimated Nos. insured in July.	Numbers recorded as unemployed.			Estimated Nos. insured in July.	Numbers recorded as unemployed.		
		Oct. 22.	Nov. 26.	Dec. 17.		Oct. 21.	Nov. 25.	Dec. 16.
Bricklayers	72,810	5,809	6,380	6,656	74,630	7,250	9,155	9,089
Masons	21,640	1,944	2,138	2,304	21,960	1,468	2,351	2,466
Plasterers	22,880	2,355	2,672	2,941	23,840	2,592	4,139	4,700
Plumbers	32,070	2,563	3,020	2,620	32,910	2,504	2,705	2,878
Slaters	5,860	588	515	470	6,220	718	799	995

Parlour and Non-Parlour Houses.

Mr. Simon asked the Minister of Health if he would state the average cost of the non-parlour three-bedroom house during the period covering approximately the last 12 months; and whether he would give examples of the highest and lowest costs with, in each case, floor area, at which contracts had recently been placed both in large cities and in small urban districts.

Mr. Greenwood said that particulars distinguishing the average price of non-parlour three-bedroom houses from that of other non-parlour houses were not available. The average price of non-parlour houses included in contracts let by or in direct labour schemes of local authorities in England and Wales during the year 1929 was £344.

Office of Works Buildings.

Sir W. Davison asked the First Commissioner of Works if he would state what was the total number of buildings completed or commenced by his Department during the past year; and what was the total actual or estimated cost.

Mr. Lansbury said that the total number of buildings which were in course of erection during the year 1929 was 245. The total estimated cost of these buildings was approximately £6,700,000.

Export of Old Buildings.

Mr. Lovat-Fraser asked the First Commissioner of Works if he was aware that the fabric of a house in Chedworth, in the Cotswolds, was about to be removed to the United States of America; and if he would consider the desirability of introducing legislation to stop this process.

Mr. Lansbury said he was advised that this was not a suitable case for intervention under the Ancient Monuments Act, which did, in fact, give the Commissioners of Works power to protect buildings not in actual occupation as dwelling-houses. He did not consider that further legislation on this point was needed at present.

A Carillon in Hyde Park.

Major Graham Pole asked the First Commissioner of Works whether it was his intention to accept an offer to defray the cost of erecting a permanent carillon of bells in Hyde Park.

Mr. Lansbury said he had this matter under consideration at present, but the question of an appropriate site in Hyde Park was one that was not free from difficulties. He was, therefore, carefully considering the question before making a decision.

Excavations Policy.

Mr. Mander asked the First Commissioner of Works whether the Government proposed to adopt the recommendation in the Final Report of the Royal Commission on Museums and Galleries in favour of an active policy of excavations in this country; whether he would consider in this connection the amount of work that would be at once provided for the unemployed and the additional attraction for visitors from abroad; and whether, in this connection he would give due weight to the claims of the buried Roman city of Uriconium.

Mr. Lansbury said that the recommendation in the report was that the British Museum should pursue an active policy of excavations in this country. That was a matter for the trustees. So far as his department was concerned, it could only deal with the sites actually in its charge, of which Uriconium was not one. His department had, during the present winter season, put in hand an extensive scheme of excavations at monuments in its charge, with the object of giving some extra employment, with consequent improvement to the monuments.

Rural Housing.

Mr. Greenwood informed Sir K. Wood that the number of dwellings completed at December 31, 1929, under the Housing (Financial Provisions) Act, 1924, in agricultural parishes in England and Wales was 15,594.

ARCHITECTS' & BUILDERS' INQUIRY BUREAU

We are glad to give questions and answers, but cannot accept responsibility for contributed replies, especially on legal matters.

May we appeal to our correspondents to submit their queries on paper of a size easily filed, and written as legibly as possible, or, better still, in typewriting!—ED.

Sound Insulation.

[REPLIES TO "J. G. G.," JANUARY 24.]

SIR,—I am not surprised to learn from "J. G. G." that he has been disappointed in the insulation of his floor (nursery over a study). The first principle in sound insulation is to ensure that all internal surfaces are absorbent; he has used cement which is just the opposite to being absorbent, viz., resilient. Sound does not only travel down through floor joists, but very largely through the walls, upon which the ends of the joists rest. No matter what material is used for soundproofing, one is asking for trouble if one does not thoroughly insulate the ends of the joists resting on the wall plates. Cavity walls act as a drum, and especially so when covered with cement or other resilient material. Slag wool or any other material used for insulating purposes should never be stamped down or hard pressed, as this destroys its chief virtue, which consists of confined air cells, whose function is to break up the sound waves. "J. G. G.'s" trouble is that he has built for sound-conducting rather than soundproofing.

J .P. S.

SIR,—The conditions existing are favourable for sound conduction, viz., hard cement wall surfaces, and direct contact through the joists from the floor to the ceiling. No amount of pugging between the joists will answer the purpose, and incidentally pugging, where used for sound insulation, should not be stamped down, but should be loose. Papering the walls of the study with thick matt paper will help, but a layer of sound-deadening quilt laid on the joists, the boards having been taken up for the purpose, will be the easiest method of attaining a satisfactory standard.

THOROUGH.

SIR,—Slag wool, in my opinion, is the best non-conducting material extant. Its combined inelasticity and want of solidity completely breaks up sound waves, and thereby prevents the transmission of sound through the material. When packing slag wool it should be pressed down by hand, not "rammed" in, or "well stamped down"; and packed to a density of 14 lb. to a cubic foot. Strips of hair felt should be laid along the joists, thus breaking continuity of woodwork and preventing transmission of sound through the woodwork itself.

TRAVELLER.

SIR,—Your correspondent's trouble of sound transmission between playroom and study is primarily due to resonance, which almost invariably results in the intensification or building up of energy, no matter whether it is mechanical, sound, or any other variety. It will be easily realised how little force is necessary to set up and keep a pendulum in motion provided that force is applied at just the right moment.

To apply the foregoing to this specific problem, it will be seen that if there is a good resonating material or structure, like the inner skin of an 11-in. cavity wall set in cement, acted upon by innumerably small forces (sound waves) either directly through the air or through the medium of some conductor, it will be set in motion or caused to vibrate. The wall, having thus been set in motion, can only be brought to rest again by dissipating its energy in some way, which dissipation chiefly takes place through the air; in other words, sound waves are produced. Again, if the air happens to be in a small, confined space, as in the cavity of an 11-in. wall, it will react like a spring, and its energy will be taken by the wall again, to be partially radiated on the other side.

In the present case the floor is primarily responsible for the trouble, not so much because sound is travelling directly through it (there is the pugging), but because it acts as a conductor passing the energy through its various members to the walls, and so round it to the ceiling and wall of the lower room. The other contributing factor is the hard plaster walls, which are almost non-absorptive of sound. Because of this finish, each sound wave has to strike the walls many times before its energy is lost. The cure, therefore, lies in isolating the floor from the joists (not in packing between the joist), and possibly in the replacement of some of the hard plaster areas by sound-absorbing material.

A. G. H.

SIR,—I think the most satisfactory cure would be to line the ceiling with a good insulation-board packed out to a depth of 1½ in. from plaster, with 2-in. strips of insulating-board screwed or nailed to joists, care being taken to butt joints tightly and cover same with suitable wood strips.

If the solution given by "G. B." is carried out, great care will have to be taken in relaying floor, otherwise the ceiling will crack and fall.

J. A. P.

In the course of a reply to this question, a correspondent writes as follows:—"The method of filling between joists described by querist must at all times be thoroughly inefficient, irrespective of what material is used; and, however good that material may be, sound is transmitted through the medium of the joists without hindrance unless the joists themselves are fully insulated. If insulation is continuous over the whole area, no packing between joists is necessary, but care must be taken that the insulating material shall not be compressed unduly."

Damp Walls.

[REPLY TO "INTERESTED," JANUARY 24.]

SIR,—Linseed oil is quite a good waterproofer for brickwork, but it needs many coats before the bricks are thoroughly greased up, and the work must be done in dry weather.

PROOF.

Building Line Question.

[REPLY TO "S. S.," JANUARY 24.]

SIR,—Your correspondent should seek the advice of a local architect, who may be able to put him in touch with the correct legal advice, or otherwise save him further trouble if the facts are entirely against him.

LOCAL.

Cracks in Bungalow Ceiling.

[REPLY TO "AUTOLYCUS," JANUARY 24.]

SIR,—The cracks are probably due to the shrinkage of green timber. Unless very open, they are not likely to be serious. Those the width of a knife edge should be cut and filled in with plaster; the others will probably fill up with distemper.

SUPERVISION.

Repointing Problem.

[REPLY TO "BUILDER," JANUARY 24.]

SIR,—Stock bricks are as liable as any to this trouble, and practically the only ones which would be immune are hard-pressed bricks, such as blue Staffordshire, or equal. The best job is to wipe off the joint flush as the work proceeds

METHOD.

Mosaic Work.

[REPLIES TO "NOVICE," JANUARY 31.]

SIR,—Mosaic work is laid on a newly floated cement bed on a properly prepared, flat, and evenly screeded foundation. This evenness, with other factors involved, ensures the plasticity being maintained of the new cement bed whilst the work is in progress. All mosaic work should be thoroughly grouted in with neat Portland cement, gauged to a creamy constituency, and cleaned off before setting with sawdust after the mosaic has thoroughly set and partially hardened. Properly grouting in is a big factor in some forms of mosaic as regards its adhesive qualities.

S. V. S.

SIR,—I should strongly recommend your correspondent to employ specialist firms and workmen for the highly specialised task of mosaic laying. I have seen many "amateur" efforts, and I have also seen the same amateur efforts taken up and relaid by specialists after a few years or months of uneven wear.

CAUTION.

Paint Stain on Cement.

[REPLY TO "F. & F.," JANUARY 31.]

SIR,—If the oil has thoroughly soaked the pigment into the new cement, it will set in with the latter just as the coat of paint which follows the brush in Keene's work is designed to do. The only remedy is to cut out and re-render, if the case is more than a surface one.

INDELIBLE.

Sewage Problem.

[REPLY TO "L.I.O.B.," JANUARY 31.]

SIR,—The filter which holds the liquid is quite useless. The outlet must be at the bottom of the filter, otherwise it ceases to be a filter at all. If the soil is quite impervious and there is no available fall in the land, the only thing to do is to form a tank into which the filter discharges, and have this tank pumped out and spread on the land at frequent intervals. It is only liquid that has to be dealt with in this way, so that this is not the onerous and unpleasant job which cesspool emptying undoubtedly is.

AEROBIC.

Roller Skating.

SIR,—Can you inform me whether the use of a spring dancing floor for the purpose of roller skating is very detrimental to its mechanism or surface? The surface is maple boards.

QUERIST.

Stud Walls.

SIR,—The main thing to avoid in either cavity or stud walls is suction; if the walls are in contact, suction is set up at once. Cavity walls would never be free from this, as ties must be put in at intervals and form the contact. Nothing attracts dampness quicker than lime and plaster; in stud walls no lime or plaster is in contact with brickwork, and the 2 in. by 2 in. studding does not draw any dampness, as it does not lay absolutely flat to brickwork. If fixed properly it would be found a sure way of preventing dampness showing on inner walls. As for vermin getting behind, that is negligible, and not so bad, surely, as all sorts of snails, slugs and noisome insects getting in cavity walls.

G. B. HOLLOWAY.

Mahogany Substitutes.

Referring to recent correspondence on this subject, the Empire Marketing Board write to point out the advantages of an Empire timber known as "African whitewood," or Larana, which comes from Nigeria, and which is coming into extensive use as a substitute for American whitewood, being obtainable in good widths and at reasonable prices. It is recommended by the Board for, among other purposes, inside linings for furniture, furniture panelling, framing for desks, drawer sides and bottoms, cheaper types of bedroom furniture, table tops not subjected to hard usage, display cabinets for counters, etc. It is described as an easily worked timber, not only by machines but by hand finishing, scraping and sand-papering. We have forwarded the Board's letter, together with samples of the timber, to our original correspondent.

THE BUILDING TRADE

THE USE AND ABUSE OF BUILDING MATERIALS—VI

By A. M. GILES, B.Sc., A.I.Struct.E., A.M.I.E.E.

BRICKS (*continued*).

Laboratory Tests.—In the previous article it was stated that the accurate measurements of the percentage absorption of water by a brick might almost be treated as a laboratory experiment. There are indeed, quite a number of tests that should be performed in a laboratory, and of them, possibly two or three call for brief descriptions. We may name them the brick-crushing, the transverse, and the pier-crushing tests.

Transverse Test.—The object of this test is to discover a value for the "Modulus of Rupture." This method of testing bricks has been performed by the Americans under the auspices of the American Society for Testing Materials (A.S.T.M.) for a number of years, and apparently it is being realised here that it serves its purpose for giving comparative values. Our Building Research Station has arranged apparatus for finding the values of the Modulus of Rupture of bricks.

A knowledge of elementary building mechanics is almost essential for one to be able to appreciate the result of the transverse test. It will perhaps assist if one first pictures it in connection with a beam or joist. A beam or joist, having a span of six or eight feet, is supported at its two ends. Upon it at mid-span is placed a concentrated load. This effect may also be obtained by swinging a load of, say, a quarter of a ton from a chain or strap passing round the middle of the beam. The condition of the beam now is that the upper layers are in compression while the lower layers are in tension. Therefore between the top and bottom layers there will be one which is in neither tension nor compression. This layer is called the Neutral Axis (N.A.).

Because of the load and the forces of reaction at the two ends, each section of the beam is under the action of a bending moment, and this is of maximum value at mid-span or at the point of action of the load. As long as the load is not too great the beam will stand the strain. This is expressed by saying that the material of the beam exerts a Moment of Resistance which is equal to the bending moment.

Let us now give values to some of the relations, *e.g.*, let the bending moment or moment of resistance be M; let the stress in the top or bottom layer be f; let the distance from the neutral axis to the top or bottom layer by y; and let the Moment of Inertia of the section under consideration be I. Now the well-known relation between these values is denoted by the equation :—

$$\frac{f}{y} = \frac{M}{I} \quad \therefore \quad f = \frac{M \times y}{I},$$

where f is the stress in lb. per sq. in. in the top or bottom layer.

Let us gradually increase the load at mid-span until the beam breaks or ruptures, and, when that happens, let fo = the stress in the top or bottom layer, and let Mo = the bending moment at mid-span, then by the above equation,

$$fo = \frac{Mo \times y}{I}$$

fo is called the Modulus of Rupture. It is the stress in lb. per sq. in. in the top or bottom layer when rupture takes place.

It should now be readily seen how this value can be determined for an ordinary 9 in. brick. Place it on two supports 7 in. apart, then place a gradually increasing load midway between the supports until the brick breaks, and then calculate the value of the Modulus of Rupture for the tested sample by the above equation. In the table below are given a few values that were obtained when a set of tests was made upon a supply of Fletton bricks.

Crushing Stress.—To determine the crushing stress of a brick requires very little explanation. A brick was placed in the machine shown at Fig.1 (article II, page 140, January 10). The compression load was gradually increased until the brick was crushed and then calculations were made to determine the load per sq. in. at the time of crushing. Tests for determining the Crushing Stress as well as the Modulus of Rupture for a number of Fletton bricks, both when they were on the flat with the frog uppermost as well as when they were on the side, were carried out, and a few of the results are given in the following table :

Crushing Stress in lb. per sq. in.		Modulus of Rupture in lb. per sq. in.	
Flat.	Side.	Flat.	Side.
1,390	2,190	597	859
1,386	2,173	602	864
1,418	2,306	641	886
Average value = 1,398	2,226	613	869

Pier Crushing.—There are many occasions in building practice when brick piers are called upon to withstand compressive loads. In most cases these compressive loads act in a direction at right angles to the brick courses, *i.e.*, the loads are said to be concentric. Such being the case, it is thought that a few words concerning the crushing test of brick piers may be of interest.

The strength of brick piers depends upon many factors, and perhaps the most important of these are : (a) The strength of the individual bricks, (b) The kind and quality of the mortar, and (c) The quality of the workmanship as well as the method of laying the brick.

The crushing stress of a brick is usually less, in fact very much less, than that of the bricks used for building the pier. In the table given above it will be seen that the crushing stress of the Fletton brick, when on the flat side, is almost 90 tons per sq. ft., while the result of a test upon piers made of Fletton bricks gave, even as the highest value, only about 42 tons per sq. ft. Another feature of much interest and one clearly demonstrated as a result of the tests is that increasing the strength of the mortar did not increase the crushing stress of the pier. In several cases it was seen that, when the mortar was too strong, the bricks were actually crushed between the mortar.

For the tests, piers of Fletton bricks had been built with three different strengths of cement mortar, viz. : 1—3, 1—4, and 1—5. When 28 days old they were tested upon a 100-ton testing machine as shown at Fig. 3, and, though there were many very interesting observable features during the progress of the tests, such as cracking and flaking, the actual crushing stresses of the three cases stated above are perhaps the most important.

Cement mortar.	Crushing stress in tons per sq. ft.
1—5	41.92
1—4	36.25
1—3	33.37

In all cases it will be seen that the crushing stress is considerably less than 90 tons per sq. ft., which was found to be that of the individual Fletton bricks. It has also been found that a 40 to 50 per cent. increase in the strength of brick piers can be obtained by placing the bricks upon their sides instead of on the flat. Also, by placing a wire mesh in each horizontal mortar joint a considerably stronger pier can be produced.

As a result of the tests described above there is another point which seems to suggest that the safe stresses for bricks set in cement mortar, as laid down by the L.C.C. (General Powers) Act, are rather smaller than they need be; for example, the safe stress for piers of medium strength bricks, such as Fletton, is given as only 8 tons per sq. ft.

A Good Brick.—Before leaving the subject of bricks, it may be of interest to give briefly some of the ideas held by bricklayers and other people upon what really is a good brick, or, at any rate, what is expected of it. There are many different opinions, though in the main there are certain outstanding properties that are generally looked for. Thus a good brick should be :—

(*a*) One that is strong, *i.e.*, that will bear safely the loads placed upon it.

(*b*) One that will last and will maintain a good appearance, whatever the action of the weather upon it.

(*c*) One that will give a good metallic ring when struck by a trowel.

(*d*) One that is uniform in size, colour and texture; free from flaws, cracks, and tiny stones, as well as the white "quicklime" spots which are so often seen in the more common bricks.

(*e*) One that, in its composition, has no easily dissolved salts, such as the sulphates of lime and magnesia, since the working of these to the surface of the brickwork soon after erection is thought by many to be the source of "efflorescence," or "salting," or the whitish material that cakes on the outside of the brickwork.

Waterproofing.—It is somewhat difficult to know just how best to deal with this question of making brick walls waterproof. It is perfectly clear, and everyone must agree, that an efficient damp-proof course is of prime necessity in preventing the gradual rise of moisture from the foundation to produce damp walls. It seems, however, that what is really wanted is something to prevent the penetration of the rain which may intermittently beat upon the brick surface. Many preventives have been tried, with more or less success, and it is certainly interesting to observe with what readiness a "one-time" sufferer will pass on the results of his experience in effecting what, in his case, has been a remedy—complete or otherwise.

It is very difficult to use one of the surface coatings so freely suggested and at the same time maintain the original colour and shade of the brickwork. For example : Coating with boiled linseed oil may be quite effective, yet it produces a disagreeable polished or shiny effect. Again, the appearance of brickwork is certainly altered by using another remedy that is much talked about, viz. : the use of paraffin wax made up in some light oil. Another treatment that has been suggested is the use of three or four coats of water-glass, which, it is said, will not cause any really noticeable alteration in the appearance. In any case, the use of any of these remedies can scarcely be said to be permanent, since we are told that they have to be renewed from time to time.

Perhaps one might be allowed to suggest that if, in the first place, good surface bricks had been used there would have been less necessity to use many of the suggested preventives. The initial cost would naturally have been greater, but this can be put against the gallons of medicine required

later if the more porous bricks have been used.

As stated in the previous article, there are many vitrified bricks whose absorption of water, after a 48-hours' immersion, is only about 3 or 4 per cent., and if these could be used for the surfacing of exposed walls there would be no necessity to use any of the waterproof coatings. It is realised that a certain amount of penetration might take place through the mortar, but even this can be guarded against by the addition of a little of any waterproofing cement to the mortar mix.

Efflorescence.—A discourse on bricks and brickwork can hardly be considered complete unless something be said about "efflorescence." This is the name given to the whitish, powdery-looking material that cakes on the surface of new brickwork. It is very disfiguring, and means of avoiding it are being eagerly sought in many directions. Chemical analysis says that, in the main, it consists of the sulphates of sodium and magnesium, as well as sodium carbonate, with, in some districts, small quantities of a chloride. Although so much is known, its cause or origin is still in dispute, and at present no satisfactory remedy has been suggested for preventing its occurrence.

It is not found on bricks which are loosely stacked about the factory yard, but very soon after the bricks have been incorporated in the brickwork, and the weather becomes warm and dry, efflorescence appears upon the surface. This has caused some authorities to say that it must come from the mortar. Further, it is rather interesting to note that whereas one writer says that it occurs to a much greater extent when lime is used instead of cement for the mortar, another says that it is only found when cement mortar has been employed.

This gives one an idea of how little is really known about the subject. One thing certainly is known, viz.: that it does form on the surface of new brickwork. It has been suggested that it is due to certain soluble salts, in the brick or the mortar, finding their way by capillarity to the surface of the brickwork and there crystallising out because of the evaporation of the moisture.

It can be washed off, but it will form again when the brickwork becomes dry. This can be done repeatedly, or at least until the whole of the soluble salts have found their way to the surface. It looks as if this might be the point when the brickwork is thoroughly dry and everything finally set. Because of this explanation, it has been suggested that its prevention could be procured by coating the new brickwork with some substance which would fill the surface pores and prevent the soluble salts coming out, but it is certainly a moot point as to whether it would be good for the brickwork, since it prevents, or at any rate delays, the drying process.

NATIONAL CERTIFICATES AND DIPLOMAS IN BUILDING

In education, as in industry, development and progress are constantly being made, though the rate of progress varies with the magnitude and constancy of industrial demands. The progress of the building industry in recent years has been rapid and obvious, but education, in the related sphere, has often appeared to be rather slow and hesitant. We are glad, therefore, to draw attention to a new educational development in which the Board of Education and the Institute of Builders are to be associated for the purpose of awarding National Certificates and Diplomas in general Building Technology. In taking this step the Board of Education have given recognition to the growing status and responsibility of the general builder, and have accepted the insistent demand made during the last few years for an improvement in the organisation and standard of technical examinations for students of the building industry.

Since 1918, building education in technical schools has increased and improved to such an extent in the substance of its work and in the number of students in attendance, that we believe the step taken by the Board of Education to be fully justified. We know that in many well-established schools the accommodation for the building department is strained and legitimate demands are being made for the extension of premises, for increase in teaching equipment, and for improved facilities for higher vocational training in building subjects. We hope, and expect, that the new goal of endeavour indicated by the National Certificate scheme will encourage and assist local authorities and local leaders in the industry to make educational provision for those youths who are prepared to study the work of the industry on broad and general lines.

General Principles of Award.—To the average reader who is engaged in the building industry or interested in its activities and educational requirements as a private individual, the term "National Certificate" may not be understood and therefore calls for some explanation. The establishment and development of grouped courses of technical instruction, each having a definite relation to one of the principal industries of the country, has led to progressive changes in the character and authority of examinations in the science and technology of these industries. One of the more recent changes has been the association of professional institutions with the Board of Education in the conduct of examinations for students undergoing approved courses of higher education in technical schools and colleges. Such an association has been established for several years in the industrial sciences of mechanical engineering, electrical engineering and chemistry, and the professional institutions associated with the Board of Education for the respective subjects are the Institution of Mechanical Engineers, the Institution of Electrical Engineers and the Institute of Chemistry.

The intention of this association of interests is to obtain co-operation between national educational administration (as represented by the Board of Education) and expert technical and professional knowledge (as represented by the professional institutions). In general, the professional institution is adequately representative of a complete industry. Certificates and Diplomas are awarded, the former in connection with part-time instruction and the latter in connection with full-time instruction. To obtain any of the awards a student must complete an approved course of instruction, planned mainly on a scientific basis, dealing comprehensively with the work of one industry and demanding a high level of intellectual attainment.

Arrangements have now been made, and conditions agreed upon, for the award of Certificates and Diplomas in Building; these will be granted to successful students of general building technology and not to students who elect to follow exclusively courses which relate only to a trade or craft. The Board of Education has recently issued to education authorities and to schools and colleges, Rules 101, which give full particulars of the arrangement with the Institute of Builders—acting as the professional institution—the conditions of award of certifying documents, and the method of conducting examinations under the scheme.

The selection of the Institute of Builders to act in conjunction with the Board of Education is an important feature of the scheme. The Institute was established on its present basis in 1884, though its history dates back to 1834. It is therefore well established and is now particularly concerned with education for the building industry; it is, in fact, educationally representative of the complete industry. Its membership is in three classes, and for the admission to membership of two of these classes annual examinations are held by the Institute. The Council of the Institute has shown, in recent years, a particular interest in the education of those who are preparing to enter the industry in higher vocational and directional capacities, and are active in seeking the development of comprehensive knowledge of the technology of building and a sound scientific knowledge of industrial administration and finance.

The Courses.—The general character and duration of the courses submitted for approval under the scheme are detailed in Rules 101 and notes for the guidance of schools and colleges in the arrangement of courses for Certificates and Diplomas have also been issued by the Board of Education. These documents show that Certificates and Diplomas will be issued in two classes, viz.: Senior and Advanced. The course for a Senior Certificate will be a part-time course extending over three years, and for an Advanced Certificate a part-time course extending over a further two years. The course for a Senior Diploma will be a full-time course extending over two years and for an Advanced Diploma a full-time course extending over a further two years. It will be possible, however, for a well-prepared student to be accepted for a three-years' course leading direct to the Advanced Diploma and also possible for a part-time student who has been for at least two years in regular employment with concurrent instruction in a senior part-time course to transfer to the full-time Advanced Diploma course of two years' duration. Hence the existing school organisation which applies to the average building course in a well-developed school can be utilised, with modification, for the National Certificate scheme.

Mode of Examination.—In all these schemes the examination of the student is conducted by the teaching institution or by a recognised local examining authority, the examination being held in each approved subject at the end of each session. In the examination for the final year of each course, the local examiners must be associated with external assessors appointed by the professional institution and acting under the joint control of the institution and the Board of Education. The assessors have powers which should enable them to ensure a reasonably uniform standard of attainment in determining the awards.

The important points about this mode of examination are:—

(1) The external professional assessment of the awards, through an institution of recognised standing, gives the imprimatur of that institution on every award made.

(2) The endorsement of the Certificate or Diploma by the Board of Education ensures that the preparation of the candidate has been carried out under approved conditions of study.

(3) The control of standard in the awards, being effected for all schools presenting candidates, gives a national value and currency to the Certificate or Diploma.

Responsibility of the Institute of Builders.—In accepting the responsibility of association with the Board of Education in this scheme, the Institute of Builders has shown its real interest in building education. Only a keen sense of duty to the building industry could have induced the Institute to accept the administrative and financial responsibility involved in so extensive a scheme. The cause is, however, worthy of the action, and we desire to express our appreciation of the generosity and public spirit shown by the Institute in accepting the invitation to act in conjunction with the Board of Education to secure a further development in building education.

Responsibility of Builders and their Staffs.—We venture to make an appeal to builders in general and to those members of their staffs whose personal influence means so much to the embryo builder starting on

his career. The successful development of technical education in its efforts to supply modern industrial needs is largely dependent upon the active interests of all parties and effective co-operation between industry and education. There is a collection and refinement of industrial knowledge which can only be gained by personal experience, but association of those who have had the experience with others who are seeking knowledge is a great mutual advantage. The inexperienced receive guidance and provide in return enthusiasm and determination to make progress. Schools have done much to spread knowledge gained by experience, to establish theories which are justified by experience and which can be depended upon and applied, to organise grouped instruction which can be economically given, and to provide the opportunity of learning many things which do not come within a student's regular experience.

The teacher can convey his information in an atmosphere conducive to learning, but he has to make special efforts to keep in touch with industrial development such as the use of new materials, new ideas of construction and erection, job organisation and management, estimating, costing and accountancy. Hence, if builders, managers, foremen and leading craftsmen can be persuaded to ally themselves with local educational efforts, take a personal interest in young employees and encourage them to grasp the opportunities provided by the schools, the industry will reap the benefit.

We may assume that the decision to issue National Certificates in Building is a recognition of the progress made in building education in recent years, but we must also recognise the scheme as a means of improving further the quality and quantity of existing educational service. It is therefore hoped that all who are interested in Building Education will unite in an effort to provide, in their particular districts, the fullest opportunities for young men who are engaged in building or in some allied vocation.

Opportunity for the Student of Building.—It may not be possible to provide courses of a National Certificate standard in the smaller schools immediately, nor even to ensure that every willing or would-be student will have the opportunity which he seeks; but in many schools the scheme will come into operation for the session 1930-31. The first examinations will be held in 1931. The courses provided must be of a general building character, but this does not exclude the entry to such courses of any genuine building employee. He must, however, be sufficiently well prepared to justify his entry, before being accepted for a National Certificate course.

A student who is engaged in a craft may elect to study that craft exclusively for a time, but he will generally be able to gain some credit for the work done and to transfer to some appropriate position in a general course, if his work has been of a highly satisfactory standard. Craft students should not be misled into attempting unwise things. Where separate courses are provided it is generally better to become master of their particular craft in the first case and then to broaden their knowledge by a course of general study. We are interested only to make clear, at this stage, that the scheme does not exclude those who commence their education as craft students, but only trade of craft *courses*.

Part-time and Full-time Education.—It is hoped that the scheme will tend to develop full-time building education and also encourage the extension of part-time day education. Full-time education is a great advantage in that it provides the opportunity for a fuller and broader treatment of essentials and gives ample time for a student to become conversant with the underlying principles of building science. The broader knowledge so obtained, and the habit of logical reasoning encouraged in such courses, give an equipment for entry to the industry, which experience shows to be indispensable for quick progress towards positions of technical and administrative responsibility.

It must not be assumed, however, that in specialised knowledge the individual who has passed through a full-time course is the superior of a person who has completed a part-time course. In breadth of treatment and contents, the full-time course has definite preparatory advantage. The part-time student, however, has another advantage, viz.: his constant association with industry and the experience gained from that association. It is not practicable to compare the two classes of students in the earlier years of their courses, but in the end the full-time student has the advantage. He ripens more quickly when transferred to the field of experience, usually has more initiative, and can settle to further and specialised study in evening classes with little difficulty.

It is not desirable nor fair, therefore, to compare National Certificates with National Diplomas on a basis of title. The titles are at present used to indicate respectively certifying documents gained under different conditions. Certificates for part-time courses and Diplomas for full-time courses. As all Certificates and Diplomas will contain a statement of the subjects of study and examination, and will be awarded for approved courses—not necessarily identical in contents—and detailed references will indicate the special or main subject of study and indicate the certifying value to an employer or authority.

We may add that readers interested in the National Certificate scheme may obtain Rules 101 (Board of Education), price 2d., from any of H.M. Stationery Offices or through any bookseller. Any inquiries relating to the Institute of Builders should be addressed to the Secretary of the Institute, at 48, Bedford-square, London, W.C.1.

NEW CINEMAS

Chalfont St. Peters.—As announced in our issue for January 10, a new company is to be formed to carry out a scheme for the erection of a new cinema, to be called the Chalfont Palace. An option on a suitable site has been obtained, and a public meeting will be held this week to consider the matter. No plans have been prepared yet. The secretary is Mr. C. M. Street, 1a, Market-place, Chalfont St. Peters, Bucks.

Chester.—A contract for the erection of a new super cinema off the Canal Side, Frodsham-street, for the Provincial Cinema Theatres, Ltd., Regent-street, W.1. (Mr. W. Benslyn, A.R.I.B.A., 17, Easy-row, Birmingham, architect), has been awarded to Messrs. McLaughlin & Harvey, Ltd., of Highbury, N.5.

Dundee.—Messrs. Allen & Friskin, 26, Castle-street, are architects for alterations to a cinema in South-row for Messrs. A. E. Binnall & Sons. Plans are now before the Town Council.

Elephant and Castle.—According to Mr. John Maxwell, chairman of British International Pictures, Ltd., a scheme is on hand for the reconstruction of the Elephant and Castle Theatre as a cinema.

Fulham Palace-road.—The Gaumont Picture Corporation, Ltd., 6, Denman-street, W.1, have acquired a site at Nos. 8-14, with adjoining land, for the erection of a 2,000-capacity super-cinema. No architect has been appointed yet to prepare the plans. Negotiations as to the building line are now in progress.

Manchester.—We are informed that as a result of the conditions for the proposed competition for the £28,000 cinema at Broadheath not being in accordance with R.I.B.A. regulations, an architect is to be appointed direct. As announced in our issue for December 20, the promoters are Messrs. F. Read, A. L. Ward, and A. Snape, also directors of the Carlton Cinema, Clayton.

Northampton.—A contract for the erection of extensions and modernisation of the cinema in Alcombe-road and Grove-road for Northampton Cinema, Ltd. (Mr. F. H. Allen, A.R.I.B.A., 26, Abington-street, architect), has been awarded to Mr. A. J. Goodwin, of Northampton.

NEW BUILDINGS IN LONDON

Acton.—Flats.—The B.C. are to put in hand the erection of a further 7 blocks of 4 flats each. The plans have been prepared by the Borough Surveyor. Messrs. Jones and Woodwroth, of Harrow, are the contractors. Their estimate for the work amounted to £10,844.

Barnet.—The East Barnet Valley Urban District Council are inviting tenders for repairs and alterations to the pumping station and other buildings at the Irrigation Farm, Brunswick Park-road, New Southgate, N.11. Mr. C. M. Barnes, M.Inst.M. & Cy.E., engineer and surveyor to the Council, has prepared the plans.

Becontree.—Shops.—A contract has been placed for the erection of a further block of shops and flats on a site in Gale-street. The builders are Messrs. Baker, Hammond and Laver, Ltd., New Road-works, Rainham. The plans have been prepared by Messrs. North, Robin and Wilsdon, FF.R.I.B.A., Townsend House, Greycoat-street, Westminster, S.W.1.

Bexleyheath.—Houses.—36 houses are to be erected in Victoria-road, Bexleyheath, for the Bexley Urban District Council. The plans are by Mr. W. T. Howse, surveyor to the Council.

Blackfriars. — Additions. — The factory premises of Messrs. King & Jarrett, Ltd., of 67, Holland-street, S.E.1, are to be extended. The plans are by Messrs. A. E. Hughes & Son, 28, Mortimer-street, W.1. Messrs. F. G. Minter, Ltd., of Ferry Works, Putney, S.W.15, are the contractors.

Brentford. — Factory. — Messrs. Fraser Nash, Ltd., Kingston-on-Thames, have decided to erect a large factory, offices and showrooms, etc., on a site in London-road. The contract will be completed by Mr. W. G. Thomas, London-road Works, Kingston-on-Thames. The steelwork will be by Messrs. T. C. Jones & Co., Ltd., Wood-lane, Shepherds Bush, W.12. The plans have been prepared by Messrs. Barker & Walford, 4, Market-place, Kingston-on-Thames.

Bromley.—Home.—A new nurses' home is being erected at the Bromley Union Institution by Mr. George R. King, building contractor, Northampton, to the plans prepared by Mr. F. Danby Smith, F.R.I.B.A., architect and surveyor, of Parliament Mansions, Victoria-street, S.W.1. The constructional steelwork will be supplied by Messrs. Young & Co., 6, Queen Anne's-gate, Westminster, S.W.1.

Chiswick.—Alterations.—Mr. F. J. Fisher, F.R.I.B.A., 35, John-street, Bedford-row, W.C.1, is the architect for alterations, etc., to the "Black Lion" public-house, Chiswick, W.4.

Croydon.—Shops.—A site has been acquired in the High-street by the Marcus Estates, Ltd., 9, New Bridge-street, E.C.4, upon which it is intended to erect a block of shops with flats or billiards hall above. The plans for the scheme are in the hands of Messrs. North, Robin & Wilsdon, FF.R.I.B.A., of Townsend House, Greycoat-place, Westminster, S.W.1. The quantity surveyor is Mr. Henry A. Mackmin, F.S.I., 10, Vigo-street, Regent-street, W.1.

Croydon.—Additions.—Various alterations and additions are to be made to properties situated in Selsdon-road. The architect for the scheme is Mr. A. M. Cawthorne, 54, Victoria-street, S.W.1.

Croydon.—Restoration.—The restoration of St. Luke's Church, Woodside, is shortly to be put in hand. The scheme has been planned by the Diocesan Architect, Mr. W. D. Caroe, F.R.I.B.A., of 3, Great College-street, Westminster, S.W.1. Messrs. Burnand and Pickett, Ltd., Woodcote-road, Wallington, have secured the contract. The cost amounts to about £8,000.

Croydon. — Conversion. — Premises in Elmers End-road have been acquired by the Midland Bank, Ltd., of Poultry, London, E.C.2, for conversion into a branch bank.

The plans for the scheme have been prepared by Messrs. Elcock and Sutcliffe, FF.R.I.B.A., of Adam House, 60, Strand, W.C.2. The quantity surveyors are Messrs. Gardiner and Theobald, 96, Gower-street, Bloomsbury, W.C.

Dagenham.—ADDITIONS.—The "Ship and Anchor" public-house, Barking-road, Becontree Heath, is to be extended for Messrs. Ind, Coope and Co., Ltd., brewers. The plans have been sanctioned by the local council.

Dagenham.—SCHOOLS. — The Essex E.C. recommend, subject to the approval of the County Council and the Board of Education, sites of not less than five acres each be purchased at Chadwell Heath and in the vicinity of Finnymore-road, Dagenham; that a three-department school for 1,350 pupils be erected on the site which the committee had agreed to acquire at Wantz-corner, Dagenham; and that a school for 450 pupils be erected on the site in the vicinity of Ford's Endowed School, Dagenham.

East Ham.—ALTERATIONS.—Alterations and additions are to be made to the business premises in High-street, E., to plans prepared by Mr. C. Living, junr., F.S.I., architect and surveyor, 75, The Grove, Stratford, E.15. The contractor is Mr. A. Webb, Romford-road, Stratford, E.15.

East Dulwich.—BANK.—Messrs. Lloyds Bank, Ltd., Gracechurch-street, E.C.4, have decided to erect a branch banking hall and offices on a corner site they have acquired in Lordship-lane, S.E. The contract has been placed with Messrs. L. and W. Whitehead, Ltd., 169, Clapham-road, S.W.9. The plans have been prepared by Messrs. Meakin, Archer and Co., 73, King William-street, E.C.4.

Edgware.—HALL.—The vicar and wardens of St. Alphage Church, Watling, have accepted a tender for the erection of the proposed new church hall. The building will cost about £5,000, and has been designed by Messrs. Nicholas & Dixon-Spain, FF.R.I.B.A., 19, Hanover-square, W.1. The builders are Messrs. Chessums, Ltd., Imperial Works, Portland-road, N.15.

Farwig-lane.—ALTERATIONS. — Plans have been approved for the carrying out of alterations and improvements to the "Farwig Arms" public house for Messrs. Charringtons Brewery, Ltd., Mile End, E.1. The company's architect is Mr. E. A. Baker.

Fulham.—GARAGE.—Messrs. Morgan Hastings, Ltd., 17, Berkeley-street, W.1, are to erect a branch garage and service depot in the New Kings-road, S.W.6. The contract has been placed with Messrs. R. Dixon and Sons, of Britannia Works, Park-walk S.W.10. The company's architect is Mr. F. Wylde, Tolworth, Surrey.

Gray's Inn-road.—ADDITIONS.—A £150,000 scheme is shortly to be put in hand by the Committee of the Royal Free Hospital. It is proposed to extend the hospital buildings by the erection of new maternity and gynæcological wards and the enlargement of the pathological departments and paying patients' wards. The plans are in the hands of Messrs. H. V. Ashley & Winton Newman, FF.R.I.B.A., 14, Gray's Inn-square, W.C.1. The quantity surveyor is Mr. H. Watkins, F.S.I., 13, Gray's Inn-square, W.C.1. Messrs. Gee, Walker & Slater, Ltd., 31, St. James-street, S.W.1, have secured the building contract.

Great Marlborough-street.—REBUILDING.—The extensive site at No. 22 has been sold by Messrs. Garrett, White & Poland, estate agents, of Hanover-street, W.1. It is understood that the existing buildings will be demolished and new and modern business premises erected.

Hanwell.—REBUILDING.—Demolition works are in progress in connection with the proposed partial rebuilding of the "King's Arms" public-house in Uxbridge-road, for Messrs. Mann, Crossman & Paulin, Ltd., Whitechapel-road, E.1. The contract for the rebuilding has been secured by Messrs. G. Challis & Co., Ltd., 185, High-street, Brentford. The plans have been prepared by Messrs. F. J. Fisher & Son, 35, John-street, Bedford-row, W.C.1.

High-road.—ADDITIONS.—Messrs. Eastern, Ltd., furnishers, have placed a contract for additions and alterations to their premises at 481, High-road, N. The builders are Messrs. J. & J. Dean, Knotts Green-road, E.10. The plans have been prepared by Messrs. H. Seymour Couchman & Sons, 520, High-road, N.17.

Hornsey.—FLATS.—Plans have been passed by the Hornsey Town Council for a block of 16 flats at Fortis Green, adjoining the electricity sub-station. Mr. W. B. Collins submitted the plans on behalf of the Rookfield Garden Village, Ltd., 13, Firs-parade, Muswell Hill.

Hounslow.—CHURCH.—A site in Vicarage Farm-road, Heston, has been acquired for the erection of a new Congregational Church. The plans are in the hands of Mr. J. P. Blake, architect, Bank House, High-street, Hounslow. The new building is to seat about 500 persons, and the plans provide also for Sunday School accommodation for about 200 children.

Ilford.—BRANCH.—Messrs. Sainsbury, Ltd., Stamford-street, S.E.1, have acquired a site in the Eastern-avenue for the erection of a branch shop and depot. The contract has been placed with Messrs. Griggs & Son, 100, Victoria-street, Westminster, S.W.1. The plans have been prepared by Mr. G. Hamblin Fox, 73, Victoria-street, S.W.1.

Merton.—HOME.—Messrs. R. J. Thomson and J. S. Thomson, F. & A.R.I.B.A., of 49, Hill-road, Wimbledon, S.W.19, are the architects for the erection of a new maternity home and extensions at the Nelson Hospital, Merton, S.W.20. The builders are Messrs. J. Burges and Sons, of Wimbledon, who tendered at £30,310.

Montague-square. — ALTERATIONS. — Extensive alterations and additions, involving a remodelling of the interior, are to be carried out to the town house at No. 41. The contract for the works has been placed with Messrs. G. E. Wallis & Sons, Ltd., Medway House, Old Cavendish-street, W.1. The plans have been prepared by Mr. A. J. Healey, F.R.I.B.A., 9, Gray's Inn-square, W.C.1.

Morden.—IMPROVEMENTS. — Plans have been prepared for the complete modernisation of the "George Inn." This property is owned by Messrs. Hodgson's Kingston Brewery, Ltd., of Kingston-on-Thames. The company's architects are Messrs. Yetts, Sturdy and Usher, 34, Gordon-square, Bloomsbury, W.C.1.

New Bond-street. — ALTERATIONS. — The premises at 152, of Messrs. West and Sons, Ltd., are to be reconstructed. Messrs. Harry Neal, Ltd., Northwood, Middlesex, have secured the contract. The plans have been prepared by Messrs. Yates, Cook and Darbyshire, of 43, Great Marlborough-street, W.1.

Notting Hill-gate.—REBUILDING. — Alterations and additions are to be made to the branch premises at 21, High-street, for Messrs. Barclays Bank, Ltd., of Threadneedle-street, E.C.3. The work has been planned by Messrs. Frank Matcham and Co., of 21, Beak-street, Regent-street, W.1. Messrs. Mullen and Lumsden, Ltd., Gresham Works, South Norwood, S.E.25, are the building contractors.

Old Kent-road.—RECONSTRUCTION.—Messrs. Wenlock Brewery Co., Ltd., of Wenlock-road, N.1, are to rebuild the "Baker and Basket" public-house, 41, Ormside-road, S.E. The cost will be about £10,000. Mr. Joseph Hill, F.R.I.B.A., of Messrs. Yetts, Sturdy and Usher, 34, Gordon-square, Bloomsbury, W.C.1, is the architect.

Pilgrim-street.—The City Corporation has received a letter from the London County Council asking the views of the Corporation on an application by Mr. H. B. Measures for consent to the erection of a building on the southern side of Pilgrim-street.

Putney.—GARAGE. — Work has commenced upon the erection of a garage, etc., on a site in Upper Richmond-road, S.W.15. The plans have been prepared by the builders, Messrs. G. W. Beattie, Ltd., of 189, Upper Richmond-road, Putney, S.W.15.

Regent Street.—OFFICES.—Messrs. J. Lyons and Co., Ltd., of Cadby Hall, Kensington, W., have purchased 22, Great Marlborough-street, W.1, for development purposes. This property is to be rebuilt as offices with restaurant occupying the ground floor and basement. The scheme has been planned by Messrs. J. Lyons and Co.'s own architectural staff at Cadby Hall, W.6.

Salisbury-square.—The London County Council has received an application from Messrs. G. and T. S. Vickery, architects, for consent to the erection of an addition to 3-5, Salisbury-square, to abut upon Hanging Sword-alley.

Shaftesbury-avenue.—SHOPS.—On the site of 79 Shaftesbury-avenue and 52-53, Dean-street, W.1, it is proposed to erect a large block of buildings to comprise shops, showrooms and offices. The scheme has been planned by Messrs. A. S. R. Ley and Son 214, Bishopsgate, E.C.3. Messrs. Sims and Russell, Bloomburg-street, Westminster, S.W.1, are the main building contractors.

Shepherd's Bush.—ALTERATIONS. — Messrs. Ashby's Staines Brewery, Ltd., Staines, have approved plans for alterations and additions to their public-house, the "Prince Arthur," in Uxbridge-road, W. The company's architect is Mr. H. N. Deane, the Brewery, Staines.

Shooters Hill. — IMPROVEMENTS. — The Metropolitan Asylums Board have recommended £520 and £25,345 for improvements to the Brook Hospital, Shooters Hill, S.E.18.

Southall.—PREMISES.—The Midland Bank, Ltd., Poultry, E.C.2, are to establish new branch premises. Messrs. Mullen and Lumsden, Ltd., of Gresham Works, South Norwood, S.E.25, have secured the building contract. The plans have been prepared by the bank's architects, Messrs. Elcock and Sutcliffe, FF.R.I.B.A., of Adam House, 60, Strand, W.C.2. The quantity surveyors are Messrs. Gardiner and Theobald, of 96, Gower-street, Bloomsbury, W.C.1.

Southampton-street. — SHOPS. — A large block of shops, showrooms and offices, is to be built on the site at the corner of Southampton-street and Euston-road, N.W.1. Messrs. Patman and Fotheringham, Ltd., of 15, Park-street, Islington, N.1, are the main contractors. The plans for the new building have been prepared by Messrs. Constantine and Vernon, architects, of 82, Mortimer-street, W.1.

Strand.—ALTERATIONS.—The premises at No. 356 are shortly to be reconstructed. Messrs. The All-In Building Co., Ltd., 1a, Warwick-road, Thornton Heath, have secured the contract for the work. The architects are Messrs. North, Robin and Wilsdon, of Townsend House, Greycoat-place, S.W.1.

Wardour-street. — BUILDING. — Following negotiations with the Westminster City Council it has been decided to proceed with the proposed rebuilding of Nos. 137-141, together with 3-5, Edward-street, and 16, Duck-lane, W.1, at the same time effecting a street improvement. A building to be used as shops, showrooms and offices is to be erected to the plans of Mr. J. J. S. Naylor, F.R.I.B.A., 19, Hanover-square, W.1.

Wembley. — FACTORY. — Messrs. Collars (London), Ltd., collar dressers, have decided to extend their premises at the Wembley Exhibition Grounds, and have had plans approved for a new factory. The building will be erected under the direction of the architect, Mr. E. Drummond Roberts, L.R.I.B.A., 49, George-street, Portman-square, W.1.

Woolwich.—REBUILDING.—Mr. A. Barton, 311, Oxford-street, W.1, on behalf of Messrs. F. W. Woolworth and Co., Ltd., has submitted an application to the local council for the rebuilding and redrainage of shops on east side of 24, 26 and 28, Hare-street.

RATES OF WAGES IN THE BUILDING TRADE

[Every endeavour is made to ensure accuracy, but we cannot be responsible for errors.]

	Masons.	Bricklayers.	Carpenters Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers.
Aberdare	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Accrington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Aldershot	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Alfreton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Alnwick	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Altrincham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Ashford (Kent)	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Ashington	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Ashton-under-Lyne	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Aylesbury	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Aylsham	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Banbury	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Barnsley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Barnstaple	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Barrow-in-Furness	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Barry	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Basingstoke	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Bath	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bedford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Berwick	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bexhill	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Birkenhead	1/9	1/9	1/9	1/10	1/9	1/9	1/9	1/3½
Birmingham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bishop Auckland	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Blackburn	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Blackpool	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bognor Regis	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Bolton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bournemouth	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bradford	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bradford-on-Avon	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Braintree	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Brentwood	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bridgwater	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Bridlington	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Brighton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bristol	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bromsgrove	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bromyard	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Bungay	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Burnley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Burton-on-Trent	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bury	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Buxton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Cambridge	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Canterbury	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Cardiff	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Carlisle	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Chatham	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Chelmsford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Cheltenham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Chester	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Chesterfield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Chorley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Cirencester	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Clacton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Colchester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Coventry	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Cranbrook	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Crewe	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Cromer	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Darlington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Deal	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Denbigh	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Derby	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Devizes	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Dewsbury	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Doncaster	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Dorchester	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Dorking	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Dovercourt	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Driffield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Droitwich	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Dudley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Durham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Eastbourne	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
E.Glam. (Mon.Val.)	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Ely	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Exeter	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Exmouth	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Fakenham	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Felixstowe	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Folkestone	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Frome	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Glossop	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Gloucester	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Godalming	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Goole	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Gosport	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Grantham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Great Yarmouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Grimsby	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Guildford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Halifax	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Harpenden	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Harrogate	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Hartlepools	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Harwich	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hastings	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Hatfield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Hednesford	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Hereford	1/5	1/5	1/5	1/5	1/5	1/4	1/4	1/0½
Herne Bay	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Hertford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hitchin	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hoddesdon	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Holt	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Huddersfield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Hull	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Hunstanton	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Huntingdon	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Isle of Wight	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Ipswich	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Keighley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Kettering	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Kidderminster	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
King's Lynn	1/6	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Lancaster	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Leamington Spa	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Leeds	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Leicester	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Leighton Buzzard	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Lichfield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Lincoln	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Littlehampton	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Liverpool	1/9	1/9	1/9	1/9	1/10	1/9	1/9	1/3½
Llandudno	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Llanelly	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
London:								
12 m. radius	1/8½	1/8½	1/8½	1/8½*	1/8½	1/8½	1/7½	1/3½
12-15 m. radius	1/8	1/8	1/8	1/8*	1/8	1/8	1/7	1/3
Loughborough	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Lowestoft	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Luton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Macclesfield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Maidstone	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Malvern	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Manchester	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Mansfield	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Margate	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Market Harb'rough	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Matlock	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Melton Constable	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Melton Mowbray	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Merthyr Tydfil	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Middlesbrough	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Newark	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Newbury	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Newcastle-on-Tyne	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Newcastle-ur-Lyme	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
New Forest	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Newmarket	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Newport, Mon.	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Northampton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Norwich	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Nottingham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Nuneaton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Oakham	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Oldham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Oxford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Paignton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Peterborough	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Plymouth	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Pontypridd	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Portsmouth	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Preston	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Ramsgate	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Reading	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Redcar	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Redditch	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Reigate	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Retford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Ripon	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Rochdale	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Rochester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Rugby	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Saffron Walden	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
St. Albans	1/6	1/6	1/6	1/7	1/6	1/6	1/6	1/1½
St. Helens	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Sawbridgeworth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Saxmundham	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Scarborough	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Sevenoaks	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Sheffield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Shrewsbury	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Sittingbourne	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Southampton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Southend-on-Sea	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Southport	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
South Shields	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stevenage	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Stockport	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stockton-on-Tees	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stoke-on-Trent	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stourbridge	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Stourport	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Stowmarket	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Stratford-on-Avon	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Stroud	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Sunderland	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Swaffham	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Swansea	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Swindon	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Tamworth	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Taunton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Thetford	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Torquay	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Totnes	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Trowbridge	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Tunbridge Wells	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Uttoxeter	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Wakefield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Walsall	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Wallsend	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Warminster	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Warrington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Warwick	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Wells (Norfolk)	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Welwyn Gar. City	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
West Bromwich	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Weston-sup-Mare	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Weymouth	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Whitby	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Wigan	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Winchester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Windsor	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Wisbech	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Wolverhampton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Woodbridge	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Worcester	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Worksop	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Worthing	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Wrexham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Wroxham	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Wymondham	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
York	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½

* The rate recognised by the National Association of Plasterers, Granolithic and Cement Workers, is 1/11½ per hour.

For Building Trade wages in Scotland, see page 329.

CONTRACTS, COMPETITIONS, &c.

For some contracts still open, but not included in this List see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed, that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given is the latest date when the tender, or the names of those willing to submit tenders, may be sent in, the name and address at the end is the person from whom or place where quantities, forms of tender, etc., may be obtained.

Following is a list of abbreviations:—Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Clerk, C.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; County Architect, C.A.; Surveyor, S.; Engineer, E.; Borough Architect, B.A.; Architect, A.

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, etc.

FEBRUARY 10.

Bacup.—Painting.—Also decorating, etc., Ebenezer Baptist school. J. Allen, 70, Dale-st.

Birmingham.—Houses.—90 parlour and 106 non-parlour type, The Avenue, Acock's-green, and 245 non-parlour type, Fordrough-lane and Botha-rd., Bordesley-green, for T.C. H. H. Humphries, City E. and S. Dep. £1 1s each.

Chadderton.—Houses.—50 non-parlour type, on Burnley-lane housing estate, for Council. S. Dep. £1 1s.

Cheriton.—Wall.—Reinforced concrete, approx. 200 yds. length of forecourt retaining wall, with approach steps and enclosure walls, fencings, and all appurtenant works, for U.D.C. A. S. Lilley, E. and S. Dep. £1 1s.

Dover.—Building.—At School House, River, for Corporation. W. B. Smith, B.E.

East Barnet Valley.—Repairs.—Also alterations to pumping station and other buildings, at Irrigation Farm, Brunswick Park-rd., New Southgate, N.11, for U.D.C. C. M. Barnes, E. and S. Dep. £1.

Edinburgh.—Railings.—Iron railings and gates and dividing fencing at Gorgie New special school, and upfilling, bottoming, levelling and turfing, etc., for E.C. J. Stewart, Executive Officer Education Offices, Castle-ter.

Farnborough.—Mortuary.—Erection of, for the Guardians, Bromley Union, at their Hospital at Locksbottom. Clerk to the Guardians, Union Offices, Bromley, Kent. Dep. £3.

Hoylake and West Kirby.—Lavatories.—Small public lavatories at Hoylake, for U.D.C. E. and S. Dep. 10s. 6d.

Ilkley.—Office.—Also storeroom, at Gas Works, Leeds-rd., for U.D.C. E. L. Gaunt, A.R.I.B.A., architect, 11, The Grove.

Leeds.—Houses.—On Meanwood and Westfield housing estate, for T.C. J. E. Acfield, City E.

Littlehampton.—Public Conveniences.—Erection of, for the U.D.C. Clerk to the Council, Town Offices. Dep. £2 2s.

Llanelly.—Houses.—48 non-parlour type, on Tower estate site, for T.C. B.S. Dep. £2.

London.—Building.—New dust shoots on site adjoining Chancellor's-wharf, for Hammersmith B.C. R. Hampton Clucas, B.E. and S.

London.—Repairs.—Internal and external decorations and repairs at 1a, Barclay-rd., and 708, Fulham-rd., for Fulham B.C. Borough Electrical Engineer, 587-591, Fulham-rd., S.W.6.

Lurgan.—Installation.—Electric light, at Lurgan R.U.C. Barracks, Co. Armagh, for Government of Northern Ireland. Secretary, Ministry of Finance, 15, Donegall-sq. West, Belfast.

Manchester.—Stonework.—Artificial stonework for Cumberland-st. sub-station, for T.C. H. C. Lamb, Chief Engineer and Manager, Electricity Department.

Mutford and Launditch.—Cottages.—4 at North Tuddenham, 4 at Hockering, 4 at Beetley, for R.D.C. W. J. Barton, clerk, The Guildhall, East Dereham. Dep. £1.

North Berwick.—Improvements.—Mason, joiner, plumber, plaster and cement, slater and roughcast, and painter work for buildings to be erected at west end of the Burgh golf course, for T.C. Andrew Robertson, B.S. Dep. £1.

Penryn.—Houses.—54, together with roads and other work, for T.C. P. Edwin Stephens, A.R.I.B.A., Midland Bank-chams., Falmouth. Dep. £2 2s.

Romsey.—Hospital.—New hospital, for Committee. Gutteridge & Gutteridge, architects, 9, Portland-st., Southampton. Dep. £2 2s.

Rugby.—Electric Lighting.—In connection with following housing schemes, for R.D.C.: Wolston, 26 houses; Brandon, 12 houses, erected; Dunchurch (London-rd.), 16 houses; Newton, 8 houses, Churchover 12 houses, in course of erection. J. E. Weeks, Temple-st. S.

Wallasey.—Garage.—Garage, etc., Central police station, Manor-rd., for C.B. B.E. and S. Dep. £1 1s.

Westhampnett.—Houses.—5 detached non-parlour type on housing site at Westergate, for R.D.C. W. H. G. Bennett, the Council's Architect.

FEBRUARY 11.

Bitteresay.—Cottages.—4 at Bradfield Farm-rd., North Benfleet, for R.D.C. S., High-st.

***Downham Market.**—New Secondary School.—Erection of, for the Norfolk C.C. Secretary, County Education Office, Stacey-rd., Norwich. Dep. £3 3s.

Essex.—Centre.—Cookery and manual instruction centre at Stanford-le-Hope Council school, for C.C. Jno. Stuart, F.R.I.B.A., County Architect. Dep. £1 1s.

Glasgow.—Building.—Employment Exchange at Kinning-park, for H.M.O.W. Architect, H.M. Office of Works, 122, George-st., Edinburgh. Dep. £1 1s.

Gosforth.—Houses.—16 three-roomed, Coxlodge-rd., for U.D.C. G. Nelson, E. and S.

Helsby.—Houses.—Erection of ten parlour and twenty-four non-parlour type houses, for Runcorn R.D.C. Engineer and Surveyor, Council Offices, 69, High-street, Runcorn. Dep. £2 2s.

Hemel Hempsted.—Restoration.—Of stone facings, and pointing, to Town Hall and Municipal Buildings in High-st., for T.C. A. Murray-Smith, B.E., Market-sq.

Liverpool.—Alterations.—At 32, Myrtle-st., for T.C. Land Steward and Surveyor.

London.—Additions.—Also alterations to bowling pavilion, Bishop's-park, for Fulham B.C. B.E. and S. Dep. £2 2s.

Reigate.—Cottages.—4 non-parlour type cottages, and 2 pairs of flats, in Horley-row, Horley, for R.D.C. S. Dep. £2 2s.

Richmond (Surrey).—House.—Boiler house and other works in Terrace-gardens, for T.C. B.E. Dep. 10s. 6d.

Risca.—Alterations.—Gymnasium and laboratories and minor alterations at Pontywaun County school, for Monmouthshire E.C. John Bain, F.R.I.B.A., County Hall, Newport. Dep. £2 2s.

Southampton.—Improvements.—Reinforced concrete filter house and terrace wall, and 182 dressing boxes, cafe, lavatories, etc., at Western Esplanade Baths, for C.B. B.E., 33, French-st. Dep. £3 3s.

South Shields.—Houses.—11, at Park-av., Cleadon Park estate, for C.B. J. Paton Watson, B.E. Dep. £2 2s.

Wealdstone.—Centre.—Maternity and child welfare centre in The Broad Way, for U.D.C. H. Walker, S. Dep. £1.

Wealdstone.—Pavilion.—Bowls pavilion and sanitary conveniences in recreation ground, off Byron-rd., for U.D.C. H. Walker, S. Dep. £1.

FEBRUARY 12.

Castle Ward.—Shed.—Roller shed, storehouse, etc., in Council Yard at Ponteland, for R.D.C. S.

Clitheroe.—Houses.—22, on Edisford-rd. housing site, for Corporation. A. R. Bleazard, B.E., Church-st. Dep. £1 1s.

Cornholme.—Renovation.—Of Shore Baptist Chapel. Abm. Marshall, 13, Garfield-st., Cornholme.

Diss.—Alterations and Extensions.—To the Post Office, for H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

Guisborough.—Alterations.—Also additions to shop premises, Westgate, for Guisborough Provident and Industrial Society. H. Moore, architect and surveyor, 16, Bedford-st., Middlesbrough. Dep. £1 1s.

Herne Bay.—Conveniences.—Erection of, for the U.D.C. The Clerk of the Council, Council Offices, Westminster Bank House. Dep. £2 2s.

Hull.—Building.—City laboratories at corner of High-st. and Alfred Gelder-st., for T.C. D. Harvey, A.R.I.B.A., City Architect. Dep. £2 2s.

Middlewich.—Demolition.—Of buildings, and for other works in Kinderton-st., Lower-st., Lendsmithy-st., and Mill-lane, for U.D.C. F. W. Stocks, F.S.I., Victoria-building. Dep. £5 5s.

Newtownards.—School.—Public elementary school building, for Down County Regional E.C. Castor J. Love, architect, 5 Wellington-pl., Belfast. Dep. £3 3s.

Orsett.—Houses.—26, together with necessary roads, sewers, surface water drains, etc., for R.D.C. G. F. Andrassy, E. and S., Palmer's-av., Grays. Dep. £1 1s.

FEBRUARY 13.

Keynsham.—Houses.—6 non-parlour, on Council's site at Whitchurch, for R.D.C. H. W. Argile, building surveyor, 16, High-st., Keynsham, near Bristol. Dep. £1 1s.

Leyton.—Demolition.—Demolition 629 and 631, High-rd., Leyton, and rebuilding party wall between 627 and 629, as external wall, for T.C. A. P. Howell, B.E. Dep. £10.

North Devon.—Additions.—Also alterations, etc., at Lynmouth Council school, for Devon C.C. County Architect, 97, Heavitree-rd., Exeter.

Streetly, Birmingham.—Telephone Exchange.—Erection of, for H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

Tunbridge Wells.—Grand Stand.—On Tunbridge Wells and South Eastern Counties Agricultural Show Ground. C. J. Parris, surveyor, 67, High-st. Dep. 10s.

Wadsley.—Decorating.—Church at Mental Hospital, for West Riding Mental Hospitals Board. W. E. H. Burton, architect and engineer, Mental Hospitals Board Offices, Wakefield.

FEBRUARY 14.

Brixham. — Post Office. — Erection of, for H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

Cardiff.—Garage.—Foundations of bus garage at Sloper-rd., for T.C. Geo. H. Whitaker, City E. Dep. £3 3s.

Cardiff.—Lavatory.—Additional lavatory accommodation at City Hall, for T.C. G. H. Whitaker, City Architect.

Edinburgh.—Rebuilding.—Reconstruction, demolition and rebuilding of 1-4, Tolbooth Wynd, Leith, for T.C. E. J. MacRae, A.R.I.B.A., City Architect.

Fleetwood.—School.—Senior school, for Lancashire E.C. Stephen Wilkinson, F.R.I.B.A., County Architect, 15, Ribblesdale-place, Preston. Dep. £2.

Ireland.—Schools.—National school at Erriff, Co. Mayo; enlarging and improving Achill Sound Convent National school, Co. Mayo; and enlarging and improving Clandouglas National school, Co. Kerry, for Commissioners of Public Works. T. Cassedy, secretary, Office of Public Works, Dublin. Dep. £1 each.

Leeds.—Extension.—Of tram depot at Swinegate, for T.C. Chorley, Gribbon & Foggitt, architects, 3, Park-place.

Leyton.—Heating.—Accelerated low pressure hot water heating at Telephone Exchange, for H.M.O.W. Contracts Branch, H.M. Office of Works, King Charles-st., S.W.1. Dep. £1 1s.

Lincoln.—Baths.—Slipper baths and conveniences at corner of Thorngate and Waterside North, for T.C. S. C. Baggott, City E. and S. Dep. £1 1s.

Rugby.—Offices.—In Railway-ter., for Rugby Benefit Building Society. W. T. Loveday, A.R.I.B.A., 2a, Lawrence Sheriffe-st. Dep. £2 2s.

FEBRUARY 15.

Drumsallan.—School.—Public elementary school, for County of Armagh E.C. G. H. Mills, architect, The Mall, Armagh. Dep. £1 1s.

Edinburgh.—Painting.—Painter work of Home 27, and at Bangour Mental Hospital, for District Board of Control. W. M. Mowat, clerk, Edinburgh District Board of Control, Castle-ter.

Glamorgan.—Building.—Works at Gwaun-y-harra farm, situated between Caerphilly and Rudry and near Gwernydomen Halt, for C.C. H. Rowland, clerk of Glamorgan Agricultural Committee, County Hall, Cardiff.

Holyhead.—Additions.—Also alterations to Police Court, for Anglesey C.C. W. O. Jones, clerk to Standing Joint Police Committee, Shire Hall, Llangefni.

Hull.—Shops.—4 shops and houses on Derringham Bank estate, Willerby New-rd., for T.C. D. Harvey, A.R.I.B.A., City Architect. Dep. £2 2s.

Inverness.—Demolition.—Dismantling of composite school buildings of timber framing and corrugated iron, comprising two classrooms, head and assistant teacher's houses, at School Buildings, Island of Vatersay, for County E.C. D. J. Tolmie, clerk, High-st., Inverness.

Newcastle-upon-Tyne. — Dismantling, removal and re-erection at High Heaton, Carrick's small snack bar at the N.E. Coast Exhibition. H. Thompson, secretary, High Heaton Tenants' Association, 29, Stephenson-rd., High Heaton, Newcastle-on-Tyne. Dep. £1.

Port Talbot.—Alterations.—Also additions to public baths, for T.C. B.E.

Salford.—Lighting.—Lodge and new roads in Eccles New-rd., Pendleton, for B.G. E. H. Inchley, clerk. Dep. £2/2s.

Trim.—Wiring, Heating.—Electric installation for lighting and heating of courthouse building, for Meath C.C. C.S., Navan.

FEBRUARY 17.

Barry.—Houses.—22 semi-detached non-parlour type, fronting proposed new road north side Buttrills housing estate, and 44 semi-detached non-parlour type houses at Buttrills housing estate, and fronting Colcot-rd. and Barry-rd., for U.D.C. E. R. Hinchsliff, Architect, Council Offices. Dep. £2 2s.

Central England.—Buildings.—Site works, foundation works and buildings in the area of the Central England Scheme, for Central Electricity Board. R. H. Fox, secretary, Trafalgar-buildings, 1, Charing Cross, London, W.C.2. Dep. £2 2s.

Greenford. — Coston School. — Erection of (second block), for the Ealing Town Council. Town Clerk, Town Hall, Ealing, W.5. Dep. £2 2s.

Hellesdon. — Mental Hospital. — Chairman of Mental Hospital Committee, Guildhall, Norwich. Dep. £5.

Hucknall.—Houses.—82, on Storth Meadow estate, for U.D.C. H. M. Aitchison, S. Dep. £2 2s.

Kilmarnock.—Exchange.—Employment exchange, for H.M.O.W. Architect, H.M. Office of Works, 122, George-st., Edinburgh.

Manchester.—Alterations.—Also extensions to Foxhill Farm, Barton Moss, for T.C. City Architect. Dep. £1 1s.

Milton, Portsmouth. — Reconstruction. Of kitchen, at St. Mary's Hospital, for the Guardians. Clerk to the Guardians, 1, St. Michael's-rd., Portsmouth. Dep. £2 2s.

Near Leeds.—Building.—Detached residence at Menston Mental Hospital nr. Leeds, for West Riding Mental Hospitals Board. W. E. H. Burton, Architect and Engineer, West Riding Mental Hospitals Board Offices, Wakefield. Dep. £1.

Norwich.—Building.—Buildings on the site adjoining main building at Mental Hospital, Hellesden, for T.C. J. S. Bullough, City E. and S. Dep. £5.

Norwich. — Houses. — Non-parlour houses at Mousehold-st., and 7 non-parlour houses at Waterhill-rd., for T.C. J. S. Bullough, City E. Dep. £5.

Nottingham.—Extension.—To Central Public Library, South Sherwood-st., for T.C. T. Wallis Gordon, City E. and S. Dep. £2.

Nuneaton.—Senior Council School, erection of, for the Education Committee. Director of Education. Dep. £2 2s.

Rastick.—Additions.—Also alterations to Longroyde schools. Sharpe & Waller, architects and surveyors, 32, Bradford-rd., Brighouse.

*Skegness.—Houses.—Erection of 46, on the Grosvenor-rd. estate, for the U.D.C. Clerk to the Council, Council Offices, Ida-rd. Dep. £1 1s.

FEBRUARY 15.

Aberdare.—Ward.—2 or 16 beds and corridors at Aberdare and District General Hospital, for Committee. T. Roderick & Sons, architects. Dep. £1 1s.

*Ham.—Houses.—Erection of 10, for the U.D.C. Clerk, 14, Church-st., Kingston-on-Thames.

Truro.—Cottage.—Residence and cottage. A. J. Cornelius, F.R.I.B.A., architect, Truro.

FEBRUARY 19.

Glasgow.—Building.—Superstructure of Central Employment Exchange building, Waterloo-st., for H.M.O.W. Architect, H.M. Office of Works, 122, George-st., Edinburgh.

Smethwick.—Telephone Exchange.—Erection of, for H.M.O.W. Contracts Branch, King Charles-street, S.W.1. Dep. £1 1s.

FEBRUARY 20.

Bristol. — Sub-stations. — Three underground transformer sub-stations, for T.C. H. Farnday Proctor, Chief Engineer and General Manager, Electricity Offices, Colston-av. Dep. £2 2s.

Kingston-upon-Hull. — Painting. — Interior and exterior of eleven steel chimney stacks, and boiler house steelwork, boiler auxiliaries, coal and ash plant, etc., for Electricity Department. J. N. Waite, City Electrical Engineer, Scalcoates-lane. Dep. £1 each.

Manchester.—Hall.—Recreation room and assembly hall at Cottage Homes, Styal, Handforth, near Manchester, for B.G. —. Hargreaves, Superintendent of Works.

South Harrow.—Telephone Exchange.—Erection of, for H.M.O.W. Contracts Branch, King Charles-street, S.W.1 Dep. £1 1s.

Wallsend.—School.—Catholic school, to accommodate 1,140 children. P. J. Stienlet, L.R.I.B.A., & J. C. Maxwell, F.R.I.B.A., architects, 5, Saville-chams., North-st., Newcastle. Dep. £2 2s.

FEBRUARY 21.

Doncaster.—Additions.—Also alterations at West Riding Court House, for West Riding C.C. P. O. Watts, A.R.I.B.A., County Architect.

London.—Saloon.—Billiards saloon at South Acton Club and Institute, 59, Stratford-rd., Acton, W.3. Secretary.

Pinner, Middlesex. — Telephone Exchange.—Erection of, for H.M.O.W. Contracts Branch, King Charles-street, S.W.1. Dep. £1 1s.

Richmond, Surrey.—Cottages.—Erection of 42 parlour and 82 non-parlour type, for the Town Council. Town Clerk, Town Hall. Dep. £5 5s.

FEBRUARY 22.

Bambridge.—Conversion.—Workhouse buildings into District Hospital, for B.G. T. Houston, architect, 17, Wellington-place, Belfast. Dep. £5 5s.

Erpingham.—Cottages.—2, at Aylmerton; 6, Briston; 2, Edgefield; 2, Felbrigg; 2, Mundesley; 2, Roughton; 4, East Ranton; for R.D.C. Buckingham & Berry, A.R.I.B.A., 43a, Prince of Wales-rd., Norwich. Dep. £1 1s.

*Kent.—Painting and General Repairs.—For the Education Committee. Director of Education, "Springfield," Maidstone.

*Stowmarket.—Houses.—Erection of, for the U.D.C. Hunt & Coates, 28, Ipswich-st., Stowmarket. Dep. £3 3s.

FEBRUARY 24.

Arvagh.—House.—For P. Mulligan, Woodland, Arvagh, County Cavan. P. J. Brady, architect, Ballyhaise, Co. Cavan.

Bexley.—Houses.—36 non-parlour type, Victoria-rd., for U.D.C. W. T. Howse, S. Dep. £2 2s.

Harrogate.—School.—Erection of Harrogate new secondary school, for West Riding E.C. Education Officer, County Hall, Wakefield.

Mid-East England.—Buildings.—Construction of site works, foundation works and buildings in the area of the Mid-East England Scheme, for Central Electricity Board. R. H. Fox, secretary, Trafalgar-buildings, Charing Cross, W.C.2. Dep. £2 2s.

FEBRUARY 25.

*Oldbury.—Employment Exchange.—Erection of, for H.M.O.W. Contracts Branch, King Charles-st., S.W.1. Dep. £1 1s.

*Castleford.—Employment Exchange.—Erection of, for H.M.O.W. Contracts Branch, King Charles-st., S.W.1. Dep. £1 1s.

FEBRUARY 26.

*Fulwood, Preston.—Telephone Exchange.—Erection of, for H.M.O.W. Contracts Branh, King Charles-st., S.W.1 Dep. £1 1s.

FEBRUARY 27.

*Uxbridge.—Extension.—Of the Post Office and Telephone Exchange, for H.M.O.W. Contracts Branch, King Charles-st., S.W.1. Dep. £1 1s.

FEBRUARY 28.

Chelmsford.—Houses.—124 on Boarded Barns estate, for T.C. J. Miles, B.E. Dep. £2 2s.

NO DATE.

Buxton.—Extension.—Working Men's Club and Institute, Ltd. C. Flint, architect. Dep. £2 2s.

Douglas (I. of M.).—Alterations.—Cable tramway depot, for Tramways Committee. W. A. Shimmin, architect and surveyor, 14, Athol-st.

Dundee.—Fencing.—Required at Corso-st. tenement scheme (second development) for Corporation. G. Baxter, Director of Housing, 91, Commercial-st.

Ellon.—Repainting.—Also decoration of interior of Victoria Hall. D. Cooper, secretary, Well Park, Ellon.

London.—Sub-station.—For Stoke Newington B.C. E. Evans, T.C. Town Hall, Milton-rd., Stoke Newington, N.16.

Tonbridge.—Houses.—Two detached houses. A. R. Butler, 47, High-st.

MATERIALS, etc.

FEBRUARY 10.

Belfast.—Building Materials.—For L.M. & S. Rly. Co., Northern Counties Committee (Ireland). F. J. Martin, Stores Superintendent, York-rd. station.

Broadstairs and St. Peter's.—Road Materials.—For U.D.C. H. Hurd, S.

Coventry.—Road Materials.—For T.C. E. H. Ford, City E. and S.

Edinburgh.—Pipes.—30 in. and 48 in. cast-iron spigot and fascet and flanged main pipes and connections, for T.C. H. H. Gracie, Engineer and Manager, 15, Calton Hill.

Gainsborough.—Road Materials.—For U.D.C. S. W. Parker, E. and S.

Gosport.—Road Materials.—For T.C. B.E.

Hoskmondwike.—Road Materials.—For U.D.C. F. W. Littlewood, S

Hertfordshire.—Tar, etc.—For C.C. Lt.-Col. A. E. Prescott, C.S.

Leeds.—Ironwork.—Sewer ironwork, galvanised dirt boxes, earthenware pipes, gullies, etc., for Sewage Committee. J. E. Acfield, City E.

London.—Road Materials.—For St. Marylebone B.C. R. C. Graves, T.C.

London.—Highway Materials.—For Finsbury B.C. B.E.

London.—Road Materials.—For Bethnal Green B.C. A. E. Darby, B.E. and S.

Melton Mowbray.—Road Materials.—For U.D.C. W. H. Jarvis, S.

Portsmouth.—Cement, etc.—For Tramways Committee. General Manager and Engineer, Guildhall.

Southport.—Road Materials, etc.—For C.B. A. E. Jackson, B.E. and S.

Stoke-on-Trent.—Lime.—For T.C. City Sewage Engineer, Lock-rd.

Surbiton.—Highway Materials.—For U.D.C. H. T. Mather, S.

Tottenham.—Road Materials.—For U.D.C. E. Townson, clerk.

Warrington.—Highway Materials.—For T.C. B.E. and S.

FEBRUARY 11

Belfast.—Builders' Materials, etc.—For C.B. General Manager, Tramways Department, Napier-st., Sandy-row.

Cardiff.—Portland Cement, etc.—For T.C. City E.

East Grinstead.—Road Materials.—For U.D.C E. and S.

London.—Road Materials.—For H.M.O.W. Contracts Branch, H.M. Office of Works, King Charles-st., S.W.1.

York.—Road Materials.—For T.C. F. W. Spurr, City E.

FEBRUARY 12.

Chorley.—Road Materials.—For R.D.C. W. Cotterill, S.

Erith.—Road Materials.—For U.D.C. E. and S.

London.—Paving Materials, etc.—For Deptford B.C. A. Purkis, T.C.

London.—Highway Materials.—For Shoreditch B.C. B.S.

London.—Road and Sewer Works, etc.—For Hackney B.C. P. Holt, B.E. and S.

Middlesex.—Road Materials.—For C.C. A. Dryland, C.E., Middlesex Guildhall, Westminster, S.W.1.

Middlesex.—Bitumen Emulsions.—For C.C. A. Dryland, C.E., Middlesex Guildhall, Westminster, S.W.1.

Oakworth.—Road Materials, etc.—For U.D.C. G. Blackbrough, E and S.

Plomesgate.—Road Materials.—For R.D.C. G. Grantham, clerk, Wickham Market.

Poole.—Highway Materials.—For T.C. E. J. Goodacre, B.E.

Richmond (Surrey).—Building and Road Materials.—For T.C. B.E. and S

Wells.—Sand, etc.—For R.D.C S.

FEBRUARY 13.

London.—Materials.—For Lambeth B.C. Town Clerk, Lambeth Town Hall, Brixton Hill, S.W.2.

FEBRUARY 14.

Brentford and Chiswick. — Materials. — E. Willis, E. and S.

North Riding of Yorkshire.—Road Materials.—For C.C. C.S., Northallerton.

Salisbury.—Building Materials.—For T.C. City E.

FEBRUARY 15.

Bedfordshire.—Highway Materials.—For C.C. C.S.

Bexley.—Granite Kerb.—For U.D.C. W. T. Howse, S.

Cheadle and Gatley.—Road Materials.—For U.D.C. J. Wrest, E and S.

Cornwall.—Road Materials.—For C.C. C.S.

Eccles.—Road Materials.—For T.C. B.S.

Felixstowe.—Highway Materials.—For U.D.C. H. Clegg, S.

Hailsham.—Road Materials.—For R.D.C. G. B. Fairchild, Highway S

Reigate.—Highway Materials.—For T.C. F. T. Clayton, B.S.

Rutford and Lothingland.—Road Materials.—For R.D.C. H. Blewitt, S., Council Offices, Oulton Broad, Lowestoft.

Ruislip-Northwood.—Highway Materials. — For U.D.C. H. R. Metcalfe, E and S.

Saffron Walden.—Road Materials.—For R.D.C. T. A. Avery, S.

Shoreham-by-Sea.—Sand, etc.—For U.D.C. J. Dunn, S.

Stafford.—Road Materials.—For Corporation W Plant, B.E.

Wandle Valley.—Lime.—For Joint Sewerage Board. Surveyor to Board, Lower Green, Mitcham.

FEBRUARY 17.

Bedfordshire.—Road Materials.—For C.C. C.S

Birkenhead.—Cement, etc.—For T.C. R. W Johnston, B.E. and S.

Blackpool.—Building and Road Materials.—For C.B. Borough Treasurer.

Dublin.—Pipes.—Cast iron pipes, valves and castings, for Corporation. G. J. Sherlock, T.C.

Edmonton.—Building Materials.—For B.G. E. Ridley, clerk.

Farnham.—Road Materials.—For U.D.C. L. H. Starling, E. and S.

Hull.—Builders' Materials, etc.—For Tramways Committee. E. S. Rayner, General Manager and Engineer.

Margate.—Highway Materials.—For T.C. E. A. Borg, B.E., 40, Grosvenor-pl.

Northamptonshire.—Road Materials.—For C.C. E. A. Black, C.S.

Nottingham.—Highway Materials.—For T.C. T. Wallis Gordon, City E. and S.

Ossett.—Highway Materials, etc.—For T.C. B.S.

Rawtenstall.—Road Materials.—For T.C. B.S.

Samford.—Road Materials.—For R.D.C. A. J. Haward, clerk, 5, Queen-st., Ipswich.

Sutton and Cheam.—Road Materials.—For U.D.C. H. Bolton, clerk.

Teddington.—Cement, etc.—For U.D.C. E. Bostock, S.

Victoria.—Bricks.—Refractory bricks and fireclay, for Yallourn power station, for State Electricity Commission of Victoria. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. B.X. 5960.)

FEBRUARY 18.

Isle of Ely.—Highway Materials.—For C.C. R. S. W. Perkins, C.S.

Leeds.—Lime.—For T.C. E. H. Howatson, Sewerage Engineer, 8, Park-sq.

Leeds.—Building Materials, etc.—For Electricity Department. C. Nelson Hefford, General Manager, Electricity Department, 1, Whitehall-rd.

London.—Road Materials.—For Holborn B.C. J. E. Parr, B.E. and S.

London.—Highway Materials, etc.—For Westminster City Council. P. Morris, T.C.

Manchester.—Paints, etc.—For Transport Committee. General Manager, 55, Piccadilly.

Salford.—Setts.—Granite Setts.—For T.C. City E.

FEBRUARY 19.

Bosmere and Claydon.—Road Materials.—For R.D.C. W. R. Kipling, District Surveyor.

Durham.—Road Materials.—For C.C. W. J. Merrett, C.E. and S.

Frome.—Road Materials.—For U.D.C. S.

Hemel Hempstead.—Highway Materials.—For T.C. A. Murray-Smith, B.E.

Kingston-upon-Hull.—Highway Materials. For T.C. T. Thomas, City E.

London.—Road Materials, etc.—For Fulham B.C. W Townend, T.C.

London.—Building Materials.—For Islington B.C. R. H. Jerman, T.C.

Maldons and Coombe.—Road Materials, etc.—For U.D.C. B.S.

Swansea.—Highway Materials.—For C.B. B.E. and S.

Twickenham.—Road Materials.—For T.C. Gilbert B. King, B.E. and S.

FEBRUARY 20.

Crowborough.—Road Materials.—For R.D.C. Capt. E. W. Ray-Johnson, Highways Surveyor.

Gravesend.—Stone.—For T.C. F. T. Grant, B.E. and S., 5, Woodville-terr.

Uckfield.—Road Materials, etc.—For R.D.C. E W. Ray-Johnson, Highway Surveyor.

FEBRUARY 21.

Sowerby.—Road Materials.—For U.D.C. J. Eastwood, S.

FEBRUARY 22.

East Riding of Yorkshire.—Road Materials.—For C.C. C.S., Beverley.

Eastbourne.—Highway Materials.—For R.D.C. W. Walker, S

Long Eaton.—Road Materials.—For U.D.C. H. Raven, S.

Rochdale.—Pipes, etc.—For C.B. Engineer and Manager, Gas Department, Dane-st.

FEBRUARY 24.

Ilkeston.—Broken Granite, etc.—For Corporation. B.S.

Southend-on-Sea.—Highway Materials.—For C.B. R. H. Dyer, B.E.

Stoke-on-Trent.—Road Materials.—For T.C. City S.

Surrey.—Road Materials.—For C.C. T. E. Ware, S.

FEBRUARY 25.

BriarField.—Road Materials.—For U.D.C. W. D. Haigh, E. and S.

FEBRUARY 26.

Ealing.—Road Materials.—For T.C. W. R. Hicks, B.S.

Goole.—Road Materials.—For U.D.C. J. H. Castle, E. and S.

London.—Building Materials, etc.—For Hammersmith B.C. B.E. and S.

London.—Highway Materials.—For Hammersmith Electricity Department. Borough Electrical Engineer, 85, Fulham Palace-rd., W.6.

FEBRUARY 27.

Hampton.—Road Materials.—For U.D.C. S. H. Chambers, S.

NO DATE.

Birmingham.—Granite, etc.—For T.C. H. H. Humphries, City E. and S.

ENGINEERING, IRON AND STEEL

FEBRUARY 18.

Caterham and Warlingham.—Drainage.—6,400 yds. of concrete and cast-iron sewers, 18 in. dia., together with all manholes, ventilating shafts and other appurtenant works, for U.D.C. John Taylor & Sons, engineers, Caxton House, Westminster, S.W.1. Dep. £5.

Cogload.—Widening.—Railway between Cogload Junction and Norton Fitzwarren: (1) From Cogload Junction to Obridge Farm, about 4½ miles in length, for G.W.R. F. R. E. Davis, secretary, Paddington Station, London. Dep. £2 2s.

Oswestry.—Waterworks.—Concrete reservoir at Bath Pool and laying of about 1,050 yds. of 6 in. cast-iron mains, together with necessary sluice valves, etc., at Mardy and Hengoed; laying 1,826 yds. of 3 in. cast-iron mains from Hengoed to Orthopaedic Hospital, together with necessary sluice valves and hydrants; laying about 700 yds. of 3 in. cast-iron mains and 1,470 yds. of 2 in. water mains from St. Martins to Little Common, together with the necessary sluice valves, hydrants, etc., for R.D.C. C. B. Barnes, C.E. and S.

FEBRUARY 11.

Ayr (Northern District).—Water Supply.—Intake on Grange Burn, above Grange Farm Steading, for C.C. Warren & Stuart, engineers, 94, Hope-st., Glasgow. Dep. £1 1s.

Blackpool.—Bridge.—At Squires Gate-lane, for C.B. Francis Wood, B.E. and S. Dep. £1.

Godalming. — Widening. —Also strengthening Godalming bridge, over River Wey, for Surrey C.C. C.E. Dep. £5 5s.

FEBRUARY 12.

Castle Ward. — Joists. — Heavy rolled steel joists for bridge works, for R.D.C. J. Bolton, Highway Surveyor, Ponteland.

Castle Ward.—Culverts.—9 small concrete or masonry culverts, for R.D.C. J. Bolton, Highway Surveyor, Ponteland.

Llantarnam.—Sewerage.—10 miles of sewers varying from 6 to 24 in. diameter, with manholes, etc., together with sedimentation and stormwater tanks, sludge well, pump house, machinery and other incidental works, for U.D.C. J. F. Jupp, E., Midland Bank-chams., Newport (Mon). Dep. £5 5s.

Ulverston.—Reservoir.—Small reservoir in concrete, and filter house in brickwork, and excavate and refill trenches and joint cast-iron pipes, approx. distance 6,600 yds., together with all fittings, for R.D.C. E.

West Riding.—Water Supply.—Connecting up of five agricultural holdings at Ousefleet, near Goole, with public water supply, for C.C. West Riding County Land Agent, County Hall, Wakefield.

FEBRUARY 13.

Belper.—Sewerage.—Sewerage and disposal works at Whatstandwell, for R.D.C. Elliott & Brown, chartered civil engineers, Burton-buildings, Parliament-st., Nottingham. Dept. £3 3s.

Neyland.—Stage.—Floating landing stage, bridge leading thereto, and alterations to existing timber jetty, for Pembrokeshire C.C. Wilon & Bell, chartered civil engineers, 57-59, Victoria-st., S.W.1. Dep. £2.

Silsden.—Reservoir.—Reinforced concrete reservoir, for U.D.C. S. Foster, clerk.

FEBRUARY 17.

Abernethy.—Sewerage.—Also sewage disposal for T.C. Bruce & Proudfoot, civil engineers, 63, Nicol-st., Kirkcaldy. Dep £1.

Barking Town.—Sewerage.—3,320 yds. of concrete tube sewers, varying in size from 15 in. to 33 in. diameter, and about 1,420 yds. of 9 in. and 12 in. stoneware pipe sewers, together with manholes and other appurtenant works, for Ilford and Barking Joint Sewerage. W. H. Radford & Son, civil engineers, Albion-chams., King-st., Nottingham. Dep. £3 3s.

Coatbridge.—Sewage.—Sewage purification works on Luggie Glen site to south of Coatbridge-Glasgow main road, and few hundred yards west of Woodside-st., for T.C. W. C. Easton, chartered civil engineer, 183, West George-st., Glasgow, C.2. Dep. £10 10s.

Ilford.—Sewer.—1,375 yds. lin. of concrete in situ culverts, varying in size from 65 in. to 74 in. diameter, together with manholes and other appurtenant works, for Ilford T.C. and Barking Town U.D.C. W. H. Radford & Son, civil engineers, Albion-chams., King-st., Nottingham. Dep. £3 3s.

Ilford.—Sewers.—3,330 yds. of concrete in situ culverts, varying in size from 58 in. to 39 in. diameter, and also for construction of various short lengths of concrete tube sewers, varying in size from 21 in. to 33 in. diameter, together with manholes and other appurtenant works, for Ilford and Barking Joint Sewerage. W. H. Radford & Son, civil engineers, Albion-chams., King-st., Nottingham. Dep. £3 3s.

Kent.—Alterations.—Pipe laying, alterations and bricklayers' work within areas of Kent, northern, southern and western districts, for M.W.B. Chief Engineer, 173, Rosebery-av., E.C.1.

FEBRUARY 18.

Dewsbury.—Sewage Works.—At Mitchell Laithes For C.B. H. Dearden, B.S. Dep. £2 2s.

Liverpool.—Shippon.—At Queen's-drive, West Derby, for T.C. Land Steward and Surveyor.

FEBRUARY 19.

South Stoneham.—Drainage.—Main sewerage and sewage disposal works in village of Hamble, for R.D.C. W. J. Green, engineer, 39, Portsmouth-rd., Woolston, Southampton. Dep. £2 2s.

FEBRUARY 20.

Bann.—Drainage.—Extensive deepening and widening, through rock and other materials, of Lower Bann River over its whole course of approximately 30 miles between Lough Neagh and tidal portion of river near Coleraine, Co. Londonderry; and for concrete construction works in connection with installation of three sets of flood gates, together with auxiliary works for navigation and fisheries, for Government of Northern Ireland. Secretary, Ministry of Finance, 15, Donegall-sq. West, Belfast. Dep. £50.

Morley.—Tanks.—Two reinforced concrete humus tanks at Sewage Disposal Works, Dewsbury-rd., Churwell, for T.C. F. Turner, B.E. Dep £2 2s.

FEBRUARY 21.

Spalding.—Sewerage.—Providing and laying of about 12,300 lin. yds of 9 in. and 6 in. concrete pipe sewers, with manholes, etc., about 150 tons of 4 in. to 10 in. cast-iron rising mains, and construction of pump wells and pumping stations, for U.D.C. C. F. Murphy, E., Lloyds Bank-chams., Morpeth. Dep. £5.

FEBRUARY 22.

Arnold.—Culvert.—Reinforced concrete box culvert at Day Brook, Thackeray's-lane, for Nottinghamshire C.C. J. Cracroft Haller, C.S. Dep. £2.

FEBRUARY 24.

Liverpool.—Wall.—River wall in connection with Otterspool improvement scheme, for T.C. City E. Dep. £3 3s.

Rainford.—Sewers.—Providing, laying and jointing of 9 in. and 12 in. earthenware sewers, to a length of approx. 10,378 yds., together with concrete manholes and sewerage disposal works, for U.D.C. H. B. Ward, consulting engineer, 26, North John-st., Liverpool. Dep. £3 3s.

FEBRUARY 26.

Isle of Wight.—Sewerage.—4½ miles of stoneware pipe sewers with manholes, settlement tanks, percolating filters, and incidental works, in parishes of Niton and Whitwell, for R.D.C. W. E. Blizard, engineer, Lansdowne House, Castle-lane, Southampton. Dep. £3 3s.

FEBRUARY 27.

Johannesburg.—Structural Steelwork.—For South African Railways and Harbours. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. A.X. 8972.)

Wanstead.—Extensions.—Bacteria beds, settling tank, humus tanks, sludge beds, and other incidental works, at sewage works, for U.D.C. E. and S. Dep. £5 5s.

FEBRUARY 28.

Hathern.—Bridge.—Reinforced concrete bridge over River Soar, near Zouch Mills, Hathern, together with approach roads and embankments, for Leicestershire C.C. C.S., Grey Friars, Leicester. Dep. £2 2s.

MARCH 1.

Cairo.—Bridge.—Over River Nile at Kasr-el-Nil, for Main Roads and Bridges Department. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. A.X. 8704.)

MARCH 3.

Australia.—Pipes.—Pipes, valves and receivers, with accessories for high-pressure services at Yallourn Power Station extensions, for State Electricity Commission. Agent-General for Victoria, Victoria House, The Strand, London. Charge £2 2s.

Watford.—Sewerage.—Construction of tanks and percolating filters at the Sewage Disposal Works, and alterations to a pumping station at Abbots Langley, for R.D.C. A. P. I. Cotterell & Son, engineers, 54, Victoria-st., Westminster, or E. H. L. Lailey, S., 9, Market-st., Watford. Dep. £5 5s.

ROAD, SEWERAGE, AND WATER WORKS

FEBRUARY 10.

Adlington.—Sewer.—With manholes and other appurtenant work on Adlington Common, for U.D.C. T. Warwick, S.

Bromley.—Making-up.—Of Farnaby-rd. (part), Siward-rd., Wendover-rd. (part) and Warren-av., for T.C. B.E. Dep. £1.

Harpenden. — Making-up. — Overstone-rd., for U.D.C. W. H. Johnson, S. Dep. £2.

Harpenden.—Making-up.—Kerbing, channelling and making-up Hyde View-rd., and part of Westfield-rd., for U.D.C. W. H. Johnson, S. Dep. £2.

Hertfordshire. — Tarring. — Surface spraying approx. 4,000,000 sq. yds. of main roads with refined tar and bituminous compounds, for C.C. Lt.-Col A. E. Prescott, County Surveyor.

Londonderry.—Pipes.—Provision and laying of a double line of 12-in. steel pipes, with cast steel ball and socket joints, in trench under bed of River Foyle, for T.C. W. Criswell, engineer, Guildhall. Dep. £5 5s.

Maldon.—Repaving.—Paving and kerbing footways on south side High-st. and on west side of Wantz-rd., for T.C. T. R. Swales, B.E.

Manchester.—Paving.—Rock asphalt and bitumen; sewering, draining, paving (concrete), flagging (artificial flags), etc., Latham-st., Openshaw; sewering, draining, kerbing and paving (concrete) Carlton-ter., Gorton; draining paving (concrete), flagging (artificial flags), etc., Manley-rd., Withington, from point 190 yds. west of Russell-av. to point 1484 yds. distant in westerly direction from westerly side of Blenheim-av.; Blenheim-av., Withington, from point 60 yds. distant in a southerly direction from Clarendon-rd. to Manley-rd.; draining, paving (rock asphalt), flagging (artificial flags), etc., Cavendish-rd., Withington, from north-westerly side of Disley-av to point 264 yds. distant in a north-westerly direction, for T.C. F. E. Warbrock Howell, T.C. Dep. £1 1s.

Whitstable. — Reconstruction. — Herne Bay-rd. (part of), Tankerton, for U.D.C. G. Dunkin, S. Dep. £2 2s.

FEBRUARY 11.

Crewe.—Making-up.—Road around east side of Queen's-park, Park-drive, part of, from Alton-st. to Victoria-av.; Priscilla-st., from Martin-st. to Earle-st.; Martin-st., par of; between Ramsbottom-st. and West Ward playground; between Peel and Ramsbottom-sts.; west side of Peel-st.; for T.C. L. Reeves, B.E. and S. Dep. £2 2s.

Doncaster.—Sewerage.—240 lin. yds. of 12 in. sewer, together with all necessary manholes, near Milethorn-lane, for C.B. F. Oscar Kirby, B.E., 2, Priory-place, Doncaster.

Gosforth.—Sewer.—270 yds. of 27 in. and 24 in. sanitary pipe sewer in North-rd., south of Three Mile Bridge, for U.D.C. G. Nelson, E. and S.

Morley.—Extension.—To Corporation-st., for T.C. F. Turner, B.E. and S.

FEBRUARY 12.

Heston and Isleworth.—Making-up.—Alexandra-rd. (part of), for U.D.C. J. G. Carey, S. Dep. £2 2s.

Leicester.—Surfacing.—Other works on Braunstone, sections 2a and 3, for T.C. J. S. Fyfe, A.R.I.B.A., Housing Architect. Dep. £2 2s.

Rochdale.—Paving.—Reservoir-st., from Belfield-rd. to Albert Royds-st., for C.B. B.S.

FEBRUARY 13.

Doncaster.—Making-up.—Of Spa-terr., Askern, and back road behind Hilton-st., Askern, for R.D.C. W. R. Crabtree, S.

Newport (Mon.).—Making-up.—Of Upper Gibbs rd. (part), for C.B. B.E. Dep. £1 1s.

Wigtown.—Pipes.—Supplying and laying 2½ miles of cast-iron pipes, of various small diameters, together with sluice valves, etc., for T.C. Crouch & Hogg, chartered civil engineers, 17, Lynedoch-st., Glasgow. Dep. £1 1s.

FEBRUARY 14.

Crompton.—Reconstruction.—Laying of steam-rolled asphalt on prepared foundations of Brunswick-st. (part of), Farrow-st. (part of), and Refuge-st., for U.D.C. F. T. Jones, E. and S.

Leicester.—Pipe.—Laying of 12 miles of 36 in. diameter water main, for T.C. G. T. Edwards, Engineer and Manager, Waterworks Offices, Bowling Green-st.

FEBRUARY 15.

Bootle. — Macadam. — Retopping in tarred macadam or other proprietary asphaltic or bitumastic material existing macadam surfaces of the carriageways in (1) Aughton-rd. and (2) Sefton-rd., for C.B. B.E. and S.

Caterham and Warlingham.—Reconstruction.—Also surfacing of Whyteleafe-rd. and Whyteleafe-hill, Caterham, for U.D.C. H. R. Martin, E. and S. Dep. £3 3s.

Eccles.—Paving.—Sewering, paving and making-up of 6 back streets and passages, for T.C. B.S. Dep. £1 1s.

Egham.—Reconstruction.—Of Tite-hill, Pooley Green-rd. (part of), Vicarage-rd. (part of), and New-rd., for U.D.C. R. I. Weymouth, E. and S., 155, High-st. Dep. £2 2s. each.

Frimley and Camberley. — Laying-out. — Of "Watchetts" playing fields, Camberley, for U.D.C. R. H. Porteous, E. and S. Dep. £3 3s.

Glasgow.—Road.—New road from Glasgow to Edinburgh, section C-D (Central); Dewshill to Harthill, for T.C. D. A. Donald, engineer, 271, Alexandra-parade, Glasgow, E.1. Dep. £3 3s.

Guildford.—Paving.—Rupert-rd., for T.C. J. W. Hipwood, B.S. Dep. £2 2s.

Hereford.—Sewer.—Laying of approx. 360 lin. yds. of 9 in. earthenware pipe sewer, together with all necessary manholes, etc., for T.C. City E.

Heswall.—Widening, etc.—Also constructing Pensby-rd., Heswall, for Wirral R.D.C. S. H. Davies, S., Brimsbage-rd.

Reigate.—Road Tarring.—For T.C. F. T. Clayton, B.S.

Silsden.—Water Supply.—Provision and laying of approximately 570 yds. of 6 in. diameter spun iron pipe, and approximately 200 yds. of 12 in. diameter spun iron pipe, together with necessary valves, air valves, etc., for U.D.C. S. Foster, clerk.

Silsden.—Roadmaking.—Roadmaking, paths and fence-walling, and wood fencing, for U.D.C. S.

Wimbledon.—Making up.—Of Grove-rd. (section H.), for B.C. T. Webster, B.E. and S. Dep. £2 2s.

FEBRUARY 17.

Antrim.—Reconstruction.—In reinforced concrete 78,480 sq. yds., for C.C. J. N. Beatty, C.S., County Courthouse, Crumlin-rd.

Edinburgh.—Sewer.—9 in. dia. fireclay pipe sewer, length approx. 1,170 lin. yds., in Biggar-rd., for T.C. B.E.

Knaresborough.—Drainage.—Drainage of playing field at King James's Grammar school, for West Riding E.C. Education Officer, County Hall, Wakefield.

Mitcham.—Road.—For (1) Road leading from St. James-rd. to Gorringe Park-av.; and (2) Pathway leading from Manor-rd. to Sherwood Park estate, for U.D.C. S.

FEBRUARY 18.

Stainland.—Widening.—Also improvement of about 250 lin. yds. of Stainland main road, at Sowood, for U.D.C. H. Edgar Moses, S.

FEBRUARY 19.

Ruthin.—Improvements.—To Geinas-Llandyrnog-rd., for R.D.C. D. E. H. Roberts, clerk. Dep. £5

Wembley.—Roads.—Surface dressing of approx. 130,000 yds. super of roads, for U.D.C. C. R. W. Chapman, E. and S.

FEBRUARY 21.

Hetton.—Making-up.—Of various streets. For U.D.C. J. Harding, S.

FEBRUARY 22.

Swindon. — Reconstruction. — Of Springfield-rd., Westcott-rd and Goddard-av., for T.C. B. L. Thompson, B.S., 34, Regent-circus.

Tyrone.—Road.—Reconstruction in reinforced concrete portion of route A.4 between Ballygawley and Augher in 6 sections, for C.C. J. W. Leebody, C.S., Omagh.

Wallasey.—Roadway.—Reinforced concrete platform, columns, etc., also roadway, for C.B. Geo. Livsey, T.C

FEBRUARY 24.

Bixby.—Reconstruction.—In bituminous material of portions of three district roads, for R.D.C. G. Grayling, Highway Surveyor

FEBRUARY 25.

Tiverton.—Sewer.—In Blundell's rd., approx. 1,217 yds. in length, from Blundell's Sanatorium to Isolation Hospital, for T.C. A. M. Kinnison, B.S. Dep. 10s. 6d.

MARCH 5.

Mid-Sussex.—Mains.—Hauling, excavating, laying and jointing about 6,000 lin. yds. of 9 in. dia. cast-iron water mains, with valves and other works incidental thereto, for Joint Water Board. F. Martin, engineer, Waterworks Offices, Boltro-rd., Haywards Heath. Dep. £2 2s.

Auction Sales, Tenders, etc

FEBRUARY 12.

London, N.W.11.—F. W. Mills, F.A.L.P.A., will sell, on the premises, High Class Timber, Huts, and Building Materials, etc., etc. Auctioneer, Auction Yard, rear Brent Station, Hendon Way, near Golders Green, N.W.11.

FEBRUARY 18.

***London.**—Fuller, Horsey, Sons & Cassell will sell by order of J. C. Gardner, I.C.A., liquidator, re Walter Jones & Sons, Ltd., at the Merchants' Hall, Baltic Exchange, St. Mary Axe, E.C.3, contractors' plant and machinery. Auctioneers, 11, Billiter-sq., Fenchurch-st., E.C.3.

FEBRUARY 19.

Newhaven.—H. J. Chapman, F.A.I., will sell, by order of Mortgagees, 10 acres of Freehold Building Land. Auctioneer, 17, High-street, Lewes.

FEBRUARY 20.

***London.**—Henry Butcher & Co. will sell, by order of the Joint Liquidators re Winstone & Co., Ltd., at 27-31, Earl-street, E.C.2, and 25, Banner-street, E.C.1, the stock in trade of a wholesale builders' merchant, including high-class chimney piece, suites, etc., fixtures, fittings and office furniture. Auctioneers, 63-64, Chancery-lane, W.C.2.

***Watford.**—Hillier, Parker, May & Rowden will sell at the London Auction Mart, 155, Queen Victoria-st., E.C.4, freehold shop property site. Auctioneers, 27, Maddox-st., W.1.

Public Appointments

FEBRUARY 12.

London.—General Building Foreman required by the Shoreditch Borough Council. Town Clerk, Town Hall, Old-st., E.C.1.

Stoke-on-Trent. — Two Architectural Assistants required in City Surveyor's Department. A. Barton, M.Inst.C.E., F.S.I., Town Hall.

FEBRUARY 17.

***Barking.**—Technical Assistant (temporary) required by the U.D.C. The Clerk, Public Offices.

***Cambridge.**—Quantity Surveyor (temporary) required. H. H. Dunn, F.R.I.B.A., County Architect, County Hall.

Kingston-upon-Thames.—(a) Junior Architectural Assistant, (b) Junior General Assistant, required by the Corporation. Borough Surveyor, Municipal Offices.

Loughborough.—General Assistant required by the Corporation. Borough Surveyor, Town Hall.

FEBRUARY 14.

***Bradford.**—Architectural Assistant (temporary) required by the Corporation. Town Clerk, Town Hall.

Enfield. — Assistant Building Inspector required by the U.D.C. Clerk to the Council, Public Offices, Enfield.

FEBRUARY 15.

***Sheffield.**—Chief Assistant Architect (Education) required in C.A. Dept. City Architect, Town Hall.

FEBRUARY 17.

Cambridge.—Deputy County Architect required by the C.C. Clerk of the Council, County Hall.

FEBRUARY 18.

***Bournemouth.**—Two Architectural Draughtsmen (temporary) required in B.E. Department. F. P. Dolamore, F.S.I, Town Hall.

***Plymouth.**—Three Architectural Assistants (temporary) required in City Engineer's Department. J. Wibberley, A.M.Inst.C.E., Municipal-buildings.

FEBRUARY 21.

Tottenham.—Architectural Assistant (temporary) required by the U.D.C. Engineer of the Council, Town Hall, N.15.

FEBRUARY 22.

***Portsmouth.**—(a) Chief Architectural Assistant, (b) Architectural Assistant, required in City Engineer's Department. Town Clerk, The Guildhall.

FEBRUARY 23.

***London.**—Principal required by the L.C.C. Education Officer (T.1), The County Hall, Westminster Bridge, S.E.1.

MARCH 4.

London.—Assistant Examiners: (Forthcoming Examination) in the Patent Office (20-25, with extension in certain cases). The Secretary, Civil Service Commission, Burlington-gardens, London, W.1.

PROPOSED NEW BUILDINGS & OTHER WORKS*

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced. Abbreviations: T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; B.G. for Board of Guardians, B.C. for Borough Council; P.C. for Parish Council; M.H. for Ministry of Health; M.T. for Ministry of Transport; C.B. for County Borough; B. of E. for Board of Education, M.A.B. for Metropolitan Asylums Board; and M.W.B. for Metropolitan Water Board; Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Clerk, C.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; County Architect, C.A.; Surveyor, S.; Engineer, E.; Borough Architect, B.A.; Architect, A.

Aberdare.—Governors of hospital granted permission to build new ward for hospital at £3,000.

Andover.—**Hampshire E.C. recommend Andover** Church School be re-organised as senior school for girls, the Andover Council Boys' School be enlarged by provision of three additional classrooms. Notices been issued for provision senior school for boys.

Ardsley.—East Ardsley Working Men's Club acquired site for club premises.

Ashton-under-Lyne.—P. Howard, A.R.I.B.A., 88, Mosley-st., Manchester, architect for elementary school for about 400 scholars at Queen's-rd., Hurst, for E.C.

Bacup.—Smith & Cross, Town Hall-chams., Southparade, Rochdale, architects for ambulance hall Mount Olivet Baptist Chapel off Burnley-rd. Cost £3,000.

Bakewell.—Byrom & Noble, AA.R.I.B.A., 9, Victoria-buildings, Bury, preparing plans for building at Holloway, near Bakewell, for Trustees, Florence Nightingale Memorial Hall.

Barking Town.—U.D.C. approved: 1,416 houses, Becontree estate (13 section), for L.C.C.; extension factory, Creekmouth, De Pass Fertilisers, Ltd.;—Children's pond and paddling pond and swimming bath in Longbridge-park approved by Council.

Basingstoke.—Hampshire E.C. recommend new boys' school for 250.

Bedlington.—F. A. Coyle, architect, 29, New Market-st., Consett, preparing plans for schools for E.C. authorities.

Bideford.—Scheme for swimming bath being considered by Council.

Billingham-on-Tees.—U.D.C. approved public baths at £13,642.

Bingley.—Site been acquired on Ashfield estate, off Bradford-rd., for technical school. Cost £21,000. Plans by H. Wormald, A.R.I.B.A., County Hall, Wakefield.

Blackburn.—Scheme being proposed for extending and modernising technical college.

Bournemouth.—T.C. approved:—Hotel and 3 garages, Castle-lane, Eldridge Pope & Co., Ltd.; lock-up garages, Upper Hinton-rd., Preston & Redman; rebuilding workshop and stores, 347 and 349, Holdenhurst-rd., W. Mabey & Son; 44 houses, Seafield-rd., S. Kermode; block plan, shops, Wimborne-rd., J. Kay.

Bradford.—Tenders amounting to £32,010 for building works connected with proposed extensions of Bradford Technical College been recommended for acceptance by Education Site, Works, and Finance Sub-Committee.

Bridlington.—Improvements to harbour, including jetty and extended and covered accommodation for handling fish on South Pier, approved by Harbour Commissioners. Scheme estimated to cost £11,500. Mr. Mitchell, engineer, Middlesbro', responsible for plans.

Bridlington.—T.C. decided to accept recommendation of E.C. to erect two intermediate schools to accommodate 400 boys and 400 girls.

Brigg.—Housing Committee of R.D.C. to prepare scheme for 100 **non-parlour houses.**

Brighton.—M.H. approved borrowing of £35,250 for 72 houses on Bevendean estate, by T.C.—Ministry are to be asked to sanction tender for £21,844 for fifty-six houses on Whitehawk Valley site.

Bristol.—Authority been given by directors for construction at G.W.R. depot at Wapping Wharf of warehouse for use of Ashe, Nye & Co., Ltd., grain and oil cake merchants.

Bury.—B.E. submitted designs for 'bus shelters in Market-st. and Haymarket-st., adjoining Kay-gardens.

Cardiff.—M.H. held inquiry into application of Glamorgan C.C. for sanction to borrow £85,000 for extension Glamorgan County Hall in Cathays Park, Cardiff.

Carlisle.—Housing Improvement Society purchased block of tenement dwellings, Union-st., for purposes of conversion into modern flats.

Carshalton.—M.A.B. recommend, subject to sanction of M.H., conversion small room next to operating theatre at Queen Mary's Hospital for Children into ster.lising room, and enclosing of verandah between wards A3 and A4, at £620.

Castleford.—J. Lumb & Co., glass manufacturers, to erect factory.

Chelmsford.—T.C. to apply for £6,200 for sewers, etc., on Boarded Barns estate, where 124 houses are to be built.—T.C. approved plans submitted for offices and covered bus park in Duke-st., for National Omnibus and Transport Co., Ltd.—Council approved plans for additions to Chelmsford Hospital, comprising new ward block, out-patients' and casualty wing, additions to Nurses' Home.

Clitheroe.—Lancashire County E.C. propose central school at Whalley, to cost £5,000. Plans by County Architect, S. Wilkinson, F.R.I.B.A., 16, Ribbleadale-place, Preston.

Coventry.—T.C. approved: Rebuilding premises 1, 2 and 3, Broadgate, Montague Burton, Ltd.; 18 houses, Broad-lane, A. Barratt; factory, Northfield-rd., G. Cave; alterations and additions to Foundry, Trafalgar-st., Midland Motor Cylinder Co., Ltd.; sub-station, Sherbourne-cres., Electricity Department; 12 houses, Ernsford-av., Philpot Bros.; alteration premises, Vicar-lane, Marks & Spencer, Ltd.; 20 houses, Ernsford-av., A. E. White; 10 houses, Beacon-rd., Whiteman & Payne; 20 houses, Pine Tree-av., and 4 houses, Chestnut Tree-av., S. Sutton; stores building, off Holbrook-lane, Dunlop Rubber Co., Ltd.

Coventry.—Tuck & Blakemore, Ltd., propose property, White-st., consisting of five houses with shops, a warehouse and five lock-up shops. S. J. Oldham, L.R.I.B.A., Chestar House, High-st.

Croydon.—M.H. sanctioned borrowing by C.B. of following: £9,297, erection of 22 dwellings, Kensington-av.; £19,892, purchase of 43 acres of land in Purley-way for housing purposes.—Plans passed: J. T. Keen & Sons, 47, Mitcham-lane, S.W.16, 35 houses and 33 garages, Maryland-rd.; J. T. Keen & Sons, 47, Mitcham-lane S.W.16, lay-out, 11 houses and garages, Springfield-rd.; T. M. Wilson, 4, Staple-inn, W.C., alterations to form bank, 102, South End; Fairweather & Ranger, 111, Charing Cross-rd., W.C.2, factory additions, Brighton-rd.; A. Duckit, 2, Fairlands-av., 26 houses, Grove-rd.; R. B. Manser, Haling Park-rd., 26 houses, Lodge-av.; Berney & Son, High-st., nurses' home, Mayday-rd. and London-rd.; Thomas & Sons, Station-approach, Chipstead, 8 houses, Bigginhill; A. H. Allen & Co., St. James'-rd., warehouse addition, St. James'-rd.; Truett & Steel, High-st., Thornton Heath, 89 houses, Benet and Norton-gardens and Stanford-rd.

Dagenham.—U.D.C. approved:—Health centre and outpatients' department, Five Elms-rd., Dagenham, for governors Ilford Emergency Hospital acting on behalf of King George Hospital; 5 houses, Saville-rd., Chadwell Heath, Wood & Wren.

Dewsbury.—Programme of E.C. for buildings is estimated to cost £118,180. Plans by B.S.

Dolgelley.—U.D.C. decided to acquire site on Bala-rd. for housing purposes.

Doncaster.—In connection with proposed additions to racecourse the Corporation negotiating with Trustees, Yorkshire Institution for Deaf, for building, which will be demolished and rebuilt on new site.

Doncaster.—M.H. held inquiry into Corporation's scheme for widening Printing Office-st. and Thorne-rd. B.S. estimated net cost of scheme at £98,000.

Ealing.—T.C. approved: Station-approach, 10 houses, for Reidco Estate, Ltd., (architects, T. P. Bennett & Son, 41, Bedford-row, W.C.1); Gunnersbury-drive, 5 houses, A. C. Kerven (architects, Newborn & Smith, 6, New-sq., Lincoln's Inn, W.C.2); Church-rd., Northolt, 3 shops, J. Darvill & Sons, "Lowgate," Lower-rd., Harrow; 53-60, Birkbeck-av., 8 houses, C. & T. Ware, 40, Claygate-rd., W.13; Eastcote-av., 11 houses and 5 garages, E. Lancaster & Sons, 125, High-rd., Wembley; Greenford-rd., 3 shops, Ruislip-rd., 4 shops, W. Hurst, 83, Ruislip-rd., Greenford; Mattock-lane, 5 shops and conversion of 71, Mattock-lane into shop, Mrs. E. Gee (architect, S. H. West, 40, The Broadway, W.5); The Grove, 2 shops and flat over, R. Langley (architect, S. H. West, 40, The Broadway, W.5); Whitton-av., transformer chamber, Uxbridge and District Electric Supply Co., Ltd., Waterloo-rd., Uxbridge; 37, Mount-av., alterations, —, Edmonds (architect, A. Taylor, 68, Brentham-way, Ealing, W.5); 52, Mansell-rd., garage, G. Wimpey & Co., Ltd. (architect, H. S. Bostock, Broadway-chambers, South-rd., Southall); "Headfort," Castle Bar Hill, 3 garages, W. R. Harriss (architects, Harriss & Harriss, Bedford-row House, 58, Theobalds-rd., W.C.1); Perivale-lane, Ealing Golf Club House, lavatory accommodation, Ealing Golf Club (architects, Goodwin & Chapman, 43, Old Queen-st., Queen Anne's Gate, S.W.1); 10, The Avenue, alterations, Lloyds Bank, Ltd., 71, Lombard-st., E.C.; 1, 7 and 9, Church-av., Northolt, 3 garages, Northolt Development Co., Ltd. (architects, Bradshaw Brown & Co., Billiter-sq.-buildings, E.C.3).

Early (N. Yorks).—Elementary school to be erected to accommodate 200 children, at £6,000.

Edmonton.—U.D.C. approved: H. Seymour Couchman & Son, 4 houses, Maldon-rd.; A. Whitaker, laundry premises, Brettenham-rd.; P. Trinlete, lay-out, Oakfield estate.

Edmonton.—U.D.C. received sanction to borrow £69,935 for proposed Hazelbury-rd. school.

Epsom.—M.H. sanctioned M.A.B. to £370 for lavatory accommodation and emergency exit to central hall, the Downs Hospital for Children.

Essex.—A £750,000 scheme by L.M.S. Rly. for improvement of Southend line, includes passenger stations at Leigh-on-Sea and Chalkwell, and conversion of Gale-st. Halt into regular passenger station.—Additional lines, which are to be electrified, will be laid down between Barking and Dagenham.—Alterations to Dagenham, Upminster, and Pitsea stations will also be included.—Additional carriage sidings are to be constructed to

* **See also our List of Contracts, Competitions, etc.**

Bow, Barking and Shoeburyness, and new loop lines at Victoria Park, Little Ilford, and Laindon, while the locomotive depot at Shoeburyness is to be altered and extended.

Essex.—E.C. recommend portable building Pitsea Council school, to provide additional accommodation for 100 scholars, at £1,809; sketch plans four additional classrooms, assembly hall, etc., at £6,500, at Braintree Chapel-hill Council school; and sketch plans for enlargement of present Stanford-le-Hope Council school, at £9,679; various alterations and additions, East Thurrock Council school and East-wood Council school.

Eton.—Plans approved by R.D.C.: Burnham: 12 houses, Westlands estate, F. W. West; extension office, Cane Packing Co.; 10 houses, Leeds-rd., C. Sanderson; 4 houses, Woodlands-av., H. Boulton; 4 houses, Lake-av., Wilfred Boulton; alterations and additions, Windmill Hotel, Salt Hill, J. Wethered & Son, Ltd.; hotel, known as Barley Mow, Farnham-rd., Charrington & Co. Iver, 10 houses, Swallow-st., Wilkinson & Halmshow.

Finchley.—U.D.C. recommended sub-committee to consider preparation of plans for school on Summers-lane site.

Foleshill.—D.C. approved: 6 houses, Wheelwright's-lane, Exhall, J. U. Jones; 6 houses, Coventry-rd., Binley, H. Clarke & Sons; 10 houses, Nunt's-lane, Exhall, F. Shaw; 4 houses, Watery-lane, Keresley, H. J. Dalton.

Glossop.—B.C. propose additions and alterations to fire and police station in Ellison-st. Plans by Hadfield & Cawkwell, 19, St. James-st., Sheffield.

Goole.—Elementary school to accommodate 1,200 children, and caretaker's house be erected at £13,000.

Grimsby.—E. E. Bentley, L.R.I.B.A., 26, Victoria-st., preparing plans for presbytery for St. Peter's Church (Rev. J. Feskens).

Guildford.—T.C. approved:—44 houses, Shepherd's Hill, for Housing Committee; new estate, Worplesdon-rd., J. M. Rutter.

Ham.—Council to invite tenders for houses.

Hampshire.—E.C. proposing school improvements in various places.

Hartismere.—R.D.C. to erect cottages as follows:—Bacton 6, Botesdale 4, Burgate 2, Cotton 4, Gislingham 2, Mendlesham 4, Occold 2, Palgrave 2, Rickinghall Superior 4, Thwaite 2, Westhorpe 6, Wortham 6, Wyverstone 4, and Yaxley 2.

Hayes.—Approved plans by U.D.C.: 2 flats and 5 lock-up garages and lavatory accommodation, Coldharbour-lane, M. J. Flynn; 7 shops and flats over, 43 to 55, Coldharbour-lane, M. Cowen; 13 houses, East-av., M. Samuels.—Works Committee reported that Minet Estate Office about to commence development of land adjoining Coldharbour farm, approximately 14½ acres, to accommodate about 170 houses.

Heston and Isleworth.—U.D.C. approved:—Perrys (Ealing), Ltd., 5 houses, Heston Hall estate; Geo. Wimpey & Co., 36 houses, Heath-rd.; H. J. Howes, 4 houses, Lampton-av.; W. J. Harris, 31 houses, Elms estate.

High Wycombe.—B.E. submitted plan of sanitary conveniences at Frogmoor, cost at £4,000; 6 houses, Mill End-rd., E. C. Cooper.

Honley.—Secondary school, to cost £37,900, for West Riding E.C.

Horsforth.—Joshua Tetley & Sons, Ltd., Brewery, Leeds, to carry out scheme, alterations and additions, "Black Bull" hotel, Town-st. Architects, Kitson, Parish, Ledgard & Pyman, Bank-chams., Vicar-lane.

Hoyland.—U.D.C. received notice from C.C. of intention to build public elementary school to accommodate 360 children.

Hucknall.—As soon as U.D.C. have overcome formalities new housing scheme will be commenced at Storth Meadow estate, which has accommodation for 200 or more houses.

Ilford.—T.C. approved:—E. Glenny & Son, 32 houses, 111/141, 160/190, Staines-rd.; T. Anders, 10 houses, 42/60, Windermere-gardens; Vernon Gordon & Co., 4 houses, 42/48, Campbell-av.; W. Wakeling, 7 houses and garages, Campbell-av.; J. W. Lohden, 15 houses, Horns-rd.; Hammond & Miles, Ltd., additions for B.T.M., Ltd., Roden-st.

Kenilworth.—U.D.C. approved: Six houses, Randall-rd., J. Barber.

Lancashire.—C.C. decided to apply to M.H. for £19,752 for senior and junior school of modern type to serve Newchurch, Culcheth, and surrounding parishes.

Leeds.—Scheme for erecting further municipal offices in Leeds, including council chamber, suite of rooms for Lord Mayor, been subject of inquiry. Proposal is to build on vacant land belonging to Corporation between the extended portion of Calverley-st. and Portland-cres. Cost roughly estimated at £760,000.

Leyton.—T.C. instructed B.S. prepare plans for branch library at Leytonstone.

Liverpool.—T.C. recommend house for Land Agent and two cottages for workmen at Vyrnwy, at £2,520.—M.H. sanctioned £1,631 by T.C., for extensions to 262, Westminster-rd.—Ministry also sanctioned £568 and £200 for adaptation, etc., 50, 52, and 54, Eldon-place for maternity and child welfare centre.—Application is to be made to M.H. for £5,454 for alterations, Quarry Bank Maternity and Rest Home.—E.C. to purchase land in Roscommon-st. for extensions to school.—Application to be made to M.H. for £7,974 for adaptation of Eddesbury Lodge for open-air day school; £4,457, extension Liverpool Institute High School for Girls; £1,449, two additional classrooms at Mossplts-lane portable Council school; additional land, north-east corner Wellesbourne-rd. school site; £538, alterations Wavertree Technical school; £150, additional cost enlarging practical rooms in connection with extension of Barlow's-lane Council school; £1,925, for piggery at Fazakerley Sanatorium.—M.H. sanctioned £520 for latrines, etc., at Fazakerley Sanatorium.—Land Steward and Surveyor to prepare plans for public offices on site purchased in Manchester-st., Dale-st., and Old Haymarket.

London (Brixton).—L.C.C. recommend £107,500 in respect of widening of Acre-lane and Clapham Park-rd. between Brixton-hill and North-rd.

London (Camberwell).—B.C. sanctioned £342 for alterations to certain conveniences, and £199 for work at Camberwell Green Men's underground convenience.—Plans passed: A. W. T. Richards, shops adjoining 71, Park-rd., to abut upon Croxted-rd.; G. Trotman, lock-up garages, Kerfield-place; F. A. Llewellyn, house, College-rd.

London (City).—Corporation recommend new sewer from Aldersgate-st. to West Smithfield, at £18,750.

London (Fulham).—M.A.B. recommend £150 for emergency exit at Western Ambulance station, Western Hospital, Seagrave-rd., S.W.—Board also recommend £660 for storage accommodation.

London (Hackney).—B.C. approved: F. Dod & Co., addition to factory at 7 and 9, Belfast-rd.; Rowley Bros., block L.C.C. dwellings, abutting on eastern side of Shore-place (Block 3); J. Pritchard & Son, factory, abutting on northern side of Wilton-rd. (between 15/17 and 35); A. E. Sewell, rebuild "Cock Tavern," 315, Mare-st.; T. Gates & Sons, additional story to factory premises, 47 and 49, Hackney-grave; I. J. Galinski, lock-up garages, rear 18, Clapton Common; F. T. Ford, one-story shops on forecourts of 210/2, Mare-st.

London (Hammersmith).—L.C.C. recommend £30,540 for paving works by B.C.

London (Hampstead).—M.A.B. recommend £1,725 for alterations to nursing staff accommodation at North-Western Hospital.

London (Hither Green).—M.A.B. recommend for weighbridge and discharge block at Park Hospital, at £260.

London (Islington).—L.C.C. approved garage building rear of 27, Blenheim-rd., next to Cottenham-rd., for H. J. White.

London (Mitcham).—U.D.C. approved: Wandsworth, Wimbledon and Epsom District Gas Co., Fairfield-street, Wandsworth, S.W.18, lavatories, Western-rd.; Royal Arsenal Co-operative Society, 147, Powis-street, Woolwich, S.E.18, branch stores, Mitcham-rd.; A. J. Crippe & Co., 116, Putney Bridge-rd., S.W.15, new building, Western-rd.; H. Poulson, 6, Graham-rd., 28 houses, Victoria-rd.; Tamworth Park Construction Co., Ltd., Tamworth-park, 24 houses, Abbotts-rd.; W. Hipperson, 136, London-rd., 9 lock-up garages, London-rd.

London (Tooting).—M.A.B. recommend £705 for milk store at Grove Hospital, Tooting-grove, S.W.17.

London (Tottenham).—M.H. sanctioned M.A.B. to improvements at North-Eastern hospital.

London (Wandsworth).—B.C. approved: Newborn & Smith: (i) alterations stable boys' quarters, Roehampton Club, Roehampton-lane, Putney; (ii) ladies' cloak room, Roehampton Club, Roehampton-lane, Putney; A. V. Gooderson, erection of two w.c.'s, Mr. S. Green's premises, Carters-yard, Southfield; G. H. Simpson, 6 garages adjoining Heath Mansions, Rusholme-rd., Putney; A. H. Murrell & R. M. Piggott, 2 garages and flat at rear of premises in Abbeville-rd., abutting on Park-place and Clapham Park-rd., Clapham South; F. T. Wooding, 30 houses and garages, Romeyn-rd., 11 houses and garages in Leigham Court-rd., and 5 houses and garages in Leigham Vale, Streatham.

London (Woolwich).—B.C. approved: F. Holder, 1, Katrine-ter., Eltham, 8 bungalows, Blanmerle-rd., Eltham; G. Downs, 420, Footscray-rd., Eltham, 8 bungalows, 52 to 66, Kingsdale-rd., Plumstead; H. W. Slegg & Sons, 1, Bercta-rd., Eltham, 20 houses, Green-lane, Eltham.—B.C. recommend, subject to approval, erection of market on site at present occupied by 13 to 20 (inclusive), Elm-ter., Eltham.

Maldon.—R.D.C. to advertise for tenders for houses at Latchingdon, Purleigh, Tollesbury, and Woodham Walter, and to advertise for sites at Little Braxted, Heybridge, Langford, Mayland, Southminster, Steeple, Stow Maries, Tillingham, Tolleshunt D'Arcy, Tolleshunt Knights, Great Totham, and Wickham Bishops, and to erect small type houses in all these parishes.

Market Harborough.—R.D.C. propose site at Fleckney for houses.

Mexborough.—It is proposed to erect primary school at £12,000. Plans by Wormald, Architects' Department, County Education Department, County Hall, Wakefield.

Northumberland.—C.C. considering plans to cost £1,100,184, for improvements of roads and bridges, outstanding items being: Haydon bridge to Haltwhistle (reconstruction), £187,000; Stocksfield to Felston (widening), £143,000; Briardene to Blyth (widening), £90,000; Morpeth to Pegswood (new road), £80,000. Council also intend to widen Haydon bridge at £30,000; construct bridge at Corbridge, at £60,000; construct bridge over South Tyne on road from Haltwhistle to Slaggyford and Alston, at £25,000; and widen Linnels bridge on Hexham-Blanchland-rd., at £25,000.

Nottingham.—City Council approved scheme for extension Aston Hall Institution for mental defectives. It was decided to plan for ultimate accommodation of 600 beds at £300 per bed.

Penistone.—Scheme being considered by E.C. of C.C. for extensions, grammar school, at £24,360.

Prittlewell (Essex).—New factory for Ekco Co. A. C. Freeman, consulting architect, Billericay.

Pwllheli.—T.C. decided to utilise present football and recreation ground as site for workmen's dwellings. S. submitted plan of 28 houses.

Queensberry.—Tenders to be invited for extensions National Provincial Union banking premises. Architects, Samuel Jackson & Son, Bradford.

Rochdale.—B.S. submitted lay-out of Clover Hall estate for additional 200 houses.—E.C. to acquire site on Balderstone Hall estate for senior school.

Romiley.—A. R. Hollingworth, 56, Deansgate, Manchester, architect for additions and alterations to premises, Guywood-lane, for the Romiley Conservative Club, Ltd.

Rotherham.—R.D.C. propose 12 non-parlour type houses, Haughton estate, and 12 similar houses, Carcliffe estate.

Rothwell (Yorks).—Health clinic upon site near Trades and Labour Club, Dodge Croft.

Salford.—Committee recommend purchase land at Wheater's Field, Lower Broughton for re-housing purposes.

Sandbach.—Parochial Council of Parish Church propose to make additions to edifice by choir vestry to plans of Austin & Paley, 24, Castle-hill, Lancaster.

Scarborough.—Cafe's Committee propose shops and bathing offices at slipway at £2,000.

Sheffield.—A. Brocklehurst & Co., F.R.I.B.A., 10, Norfolk-st., Manchester, preparing plans for Sunday School at Woodseats for Wesleyans' Chapel Committee. Cost £5,700. The buildings are to accommodate 400 children.

Sheffield.—J. Mansell Jenkinson, A.R.I.B.A., Chapman & Jenkinson, architects, Imperial-chams., 18, Norfolk-st., been appointed by Board of Management of Children's Hospital to prepare plans for extensions at Western Bank.

Shelmerdale.—U.D.C. considering erecting isolation hospital.

South Harrow.—Middlesex C.C. building temporary elementary school at £2,043.

South Mimms.—R.D.C. approved: 6 houses, Strafford-gate, —, Jayes; 6 houses, Byng-drive, —, Hicks.

Southend-on-Sea.—C.B. approved: alterations and additions and new garage and conversion of house into shop, 43, West-rd., W. T. Finch; 7 houses, Sutherland Boulevard, W. A. Walker; alterations and additions to bottling stores, Southchurch-rd., Meux's Brewery Co., Ltd.; alterations and additions, "Hotel Victoria," High-st., Southend, Courage & Co., Ltd.; nurses' home, General Hospital, Prittlewell Chase, Southend-on-Sea New General Hospital Committee.

Staffordshire.—The Staffordshire C.C. to purchase for proposed new senior boys' school at Kidsgrove, land corner of Third-av. and Fourth-av.

St. Helen's.—Corporation propose improvements of bridge over canal at Penkford-lane.

Stainforth.—Funds being raised for parish church (Vicar, Rev. W. S. Fletcher). Cost £6,000.

Tamworth.—R.D.C. to reconstruct and widen wharf canal bridge, Amington-rd., at £4,020.

Thorne.—S. to R.D.C. prepared plans for 36 houses at South End, Thorne, and plans for 100 houses at rear King Edward-rd.

Tynemouth.—T.C. approved:—Officers' quarters, Union Institution, Preston-rd., by W. Stockdale, for Guardians; alterations to business premises, corner of Hudleston-st. and Eskdale-ter., Cullercoats, W. Stockdale, for J. J. Hudson; alterations, Martin's Bank premises, Bedford-st., by Dixon & Bell, for Martin's Bank, Ltd.; alterations, "Northumberland Arms" P.H., Bedford-st., by J. Oswald & Son, for Newcastle Breweries, Ltd.

Uxbridge.—Council's architect been instructed to prepare a lay-out plan of estate at Hillingdon Heath.

Wakefield.—Hustler & Taylor, L.R.I.B.A., 24, Bepergate, Pontefract, architects for garage in Corporation-st. for Borough Co-operative Society, Ltd.

Wallasey.—Estates and Housing Committee instructed B.S. to press on with preliminary negotiations for purchase of land at Moreton for housing purposes.

Walthamstow.—Scheme for laying cables in roads of district where supply current not yet available passed by T.C. Estimated cost £134,867.

Warrington.—E.C. propose additional temporary school accommodation for about 250 children.

Wellingborough.—Gotch & Saunders, F.R.I.B.A., architects, Bank-chams., Kettering, prepared plans for premises, Market-sq., for Northamptonshire Printing and Publishing Co.

Welwyn.—R.D.C. decided to make application to H.M. for order to provide buildings for public offices and apply for sanction to £13,000.

West Bromwich.—Ideal Benefit Society acquired site, Pitmaston estate, for bend offices. Plans by H. W. Hobbiss, A.R.I.B.A., 33, Newhall-st., Birmingham.

West Hartlepool.—Governors, Cameron Hospital, considering additional accommodation to house 76 beds, at £6,000.

Wigan.—Plans approved by Watch Committee for extensions central police office and Pemberton police office, at £1,456. It is also proposed to make alterations to Newtown police office, cost £1,606. B.E., W. P. Gardner.

Winchester.—Hampshire E.C. propose 3 more classrooms at boys' schools.—E.C. also propose second story over laboratory at girls' school.

Withington.—A. Hartley & Son, builders, Lathomm estate, proposing 236 houses and shopping area on Finchley-rd., Manideth-rd. West and Wellington-rd. Plans by Meller, Speakman & Hall, 1, Cooper-st., Manchester.

Wolston.—P.C. have asked the R.D.C. to consider 12 more houses.

Wolstanton.—U.D.C. considering erection 150 houses on central site off Milehouse-lane, Wolstanton.

Wrightington.—Parochial council of the Parish Church (Vicar, Rev. T. B. Heaton) proposes Sunday schools.

York.—Archbishop of York appeals for support for proposed church on Corporation estate at Tang Hall.

PRICES CURRENT OF MATERIALS.*

Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry.

BRICKS, &c.

Per 1,000. Alongside, in River Thames up to London Bridge.

	£ s. d.
Best Stocks	4 3 6
Second Hard Stocks	3 18 6

Per 1,000. Delivered at London Goods Stations.

	£ s. d.		£ s. d.
Flettons, at King's Cross	2 12 3	Best Blue Pressed Staffs	9 5 0
Do., grooved for Plaster ...	2 14 3	Do. Bullnose ...	9 15 0
Do., Bullnose...	3 7 3	Blue Wire Cuts	7 5 0

Best Stourbridge Fire Brick :—

2½ in.,c.....	5 11 0	3 in.	10 3 0

GLAZED BRICKS—

Best White Ivory, and Salt Glazed Stretchers ...	21 0 0	D'ble Str'tch'rs	29 10 0
		D'ble Headers...	28 10 0
Headers	20 10 0	One Side and two Ends ...	30 10 0
Quoins, Bullnose and 4½ in. Flats	27 10 0	Two Sides and one End	31 10 0
		Splays, and Squints	2s 0 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

BREEZE CONCRETE SLABS

Delivered London

	s. d.		s. d.
2 in. per yd. super,	1 11	3 in per yd. super	2 9
2½ in. „ „	2 4	4 in. „ „	3 6

	s. d.	
Thames Ballast	9 9 per yd.	delivered 2 miles radius Paddington.
Pit Sand	12 0 „ „	
Thames Sand	12 0 „ „	
Best Washed Sand.....	12 6 „ „	
¾ in. Shingle for Ferro-Concrete	11 6 „ „	
¼ in.	12 0 „ „	
½ in. Broken Brick.....	11 6 „ „	
Pan Breeze	8 0 „ „	

Per ton delivered in London area in full van loads. Best Portland Cement. British.

Standard Specification. Test £2 6 0 to £2 8 0 20s. alongside at Vauxhall in 80-ton lots.

	£ s. d.
Ferrocrete per ton extra on above	0 7 6
Vitrocrete „ „	0 7 6
Super Cement (Waterproof)	3 16 0
Roman Cement	8 15 0
Parian Cement.....	5 15 0
Keene's Cement, White	5 15 0
„ „ Pink.....	5 10 0
Plaster, Coarse, Pink	2 0 0
„ „ White	3 12 6
„ Fine	5 12 0
Strapite, Coarse	3 9 0
„ Finish	3 17 0
Grey Stone Lime.....	2 10 9
Chalk Lime	2 10 9
Best Ground Blue Lias Lime	1 17 6
Hair ..... per cwt.	2 2 6
Granite Chippings	1 12 0

NOTE.—Sacks are charged 1s. 9d. each and credited 1s. 6d. if returned in good condition within three months carr. pd.

Stourbridge Fireclay in s'oks 37s. 0d. per ton at rly. dp.

STONE.

BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube..... s. d. 2 10

BEER STONE—RANDOM BLOCK—
Free on rail at Seaton Station per ft. cube 2 3
Delivered free on rail Nine Elms, S.R. per ft. cube 3 1½
Selected approximate size one way, 1d. per cubic foot extra ; selected approximately three sizes or for special work, 3d. per cubic foot extra.

PORTLAND STONE.—
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Ely., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube..... 4 4½
Do. do. delivered on road wagons at above stations, per ft. cube..... 4 5½
White basebed, 3d per ft. cube extra.

NOTE.—1d. per ft. cube extra for every foot over 20 ft *average*, and ½d. beyond 30 ft.

HOPTON-WOOD STONE.—
F.O.R. Quarries, Wirksworth, Derbyshire. s. d.
Random blocks from 10 ft. and over P. ft. cb. 14 0
Sawn two sides ..... „ 22 6
Sawn three or four sides ..... „ 27 6

YORK STONE, BLUE—*Robin Hood Quality*,
Delivered at any Goods Station, London.
6 in. sawn two sides landings to sizes (under 30 ft. super)..... Per ft. super 5 6
6 in. rubbed two sides, ditto ..... „ 6 0
3 in. sawn two sides slabs (random sizes) „ 2 3½
2 in. to 2½ in. sawn one side slabs (random sizes) ..... „ 1 6½
1½ in. to 2 in. ditto, ditto ..... „ 1 3½

HARD YORK—
Delivered at any Goods Station, London.
Scappled random blocks ..... Per ft. cube 6 3
6 in. sawn two sides landing to sizes (under 40 ft. super) ..... Per ft. super 5 1½
6 in. rubbed two sides, ditto ..... „ 6 1½
4 in. sawn two sides slabs (random sizes) „ 2 7½
3 in. ditto ditto „ 2 10
2 in. self-faced random flags.....Per yd. super 8 8

CAST STONE

Delivered in London area in full van loads, per ft. cube: Plain, 2s. 6d. ; Moulded, 2s. 6d. ; Cills, 10s. 0d

WOOD.

GOOD BUILDING DEAL.

Inches.	per stan.	Inches.	per stan.
4 × 11	£27 10	3 × 6	£21 0
4 × 9	23 0	3 × 11	25 0
4 × 6	25 0	2 × 11	26 0
6 × 7	23 0	3 × 9	24 0
3 × 8	22 0	2½ × 9	24 0
3 × 7	22 0	3 × 4½	21 0
2½ × 7	21 0	3 × 4	21 0

PLANED BOARDS.

1 × 11	£30 0	1 × 9	£23 0

PLAIN EDGE FLOORING

Inches.	per sq.	Inches.	per sq.
⅜.....	18/-	1¼.....	30/-
½.....	21/-	1½.....	34/-
1	24/-		

TONGUED AND GROOVED FLOORING

Inches.	per sq.
1	24/-
1¼.....	30/-
1½.....	34/-

BATTENS.

ins.	s. d.
¾ x 2.....per 100 ft.	2 6

MATCHING (BEST).

Inches.	per sq.
⅜.....	16/6
½.....	19/-
¾.....	24/-

SAWN LATHS.

	s. d.
Per bundle	2 6

1" AND UP THICK.

	£ s. d.	£ s. d.
Dry Austrian Wainscot, per ft. cube	0 18 0	to 0 18 0
Dry American and/or Japanese Figured Oak, ft. cube.....	0 14 0	to 0 15 0
Dry American and/or Japanese Plain Oak, ft. cube	0 10 0	to 0 13 0
Dry sq. edged Honduras Mahogany, ft. cube.....	0 15 0	to 0 18 0
Dry Log cut Honduras Mahogany, ft. cube.....	0 16 0	to 1 1 0
Dry Cuba Mahogany, ft. cube....	1 1 0	to 1 10 0
Dry Teak, ft. cube	0 13 0	to 0 15 0
Dry American Whitewood, ft. cube	0 10 0	to 0 14 0
Best Scotch Glue, per cwt.	4 10 0	to —
Liquid Glue, per cwt.	4 7 0	to 5 10 0

SLATES.

First quality slates from Bangor or Portmadoc carriage paid in full truck loads to London Rate Station. Per 1,000 actual.

	£ s. d.		£ s. d.
24 by 12	31 0 0	18 by 10	17 5 0
22 by 12	27 19 6	16 by 9	15 10 0
22 by 11	25 5 0	16 by 10	14 14 6
20 by 12	24 7 6	16 by 8	11 5 0
20 by 10	20 17 6		

TILES.

Delivered at London rate stations in full truckloads of not less than 6 tons. Per 1,000. f.o.r. London.

Best machine-made tiles from Broseley or Staffordshire district.....	£5 2 6
ditto hand-made ditto	5 7 6
Ornamental ditto	£12 6
Hip and valley tiles (per dozen) { Hand-made	0 9 6
{ Machine-made	0 9 0

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION, PER TON—

R.S. Joists, cut and fitted	£12 10 0
Plain Compound Girders	14 10 0
„ Stanchions	16 10 0
In Roof Work	19 10 0

MILD STEEL ROUNDS.—To London Station, per ton

Diameter.	£ s. d.	Diameter.	£ s. d.
½ in.	12 0 0	⅝ in. to ¾ in.	10 15 0
⅝ in.	11 0 0	⅞ in. to 2½ in.	10 10 0

WROUGHT-IRON TUBES AND FITTINGS—
(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent., less above gross discounts, carriage forward, if sent from London Stocks.)

	Tubes.		Fittings.		Flanges.	
	Wrought Mild Steel.	Genuine Staffs. Iron.	¼ in. and under.	Over ¼ in.	¼ in. and under.	Over ¼ in.
	%	%	%	%	%	%
Gas	65	52½	45	47½	55	57½
Water	61½	48½	40	42½	50	52½
Steam	57½	45	35	37½	45	47½
Galv. gas.....	52½	40	35	37½	45	47½
Galv. water	47½	35	30	32½	40	42½
Galv. steam	42½	20	25	27½	35	37½

*C.I.—HALF-ROUND GUTTERS—London Prices ex Works

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	10d.	7½d.	2½d.
3½ in.	10½d.	8½d.	2½d.
4 in.	10½d.	9½d.	2½d.
4½ in.	11½d.	10½d.	2½d.
5 in.	1/1½	11½d.	3½d.

*O.G. GUTTERS.

3 in.	1/0	10½d.	2½d.
3½ in.	1/0½	10½d	2½d.
4 in.	1/1½	10½d	2½d.
4½ in.	1/2½	1/-	2½d.
5 in.	1/5	1/2½	3½d.

*RAIN-WATER PIPES, &c.

Per yd. in 6 ft.	Pipe.	Bends, stock angles.	Branches, stock angles.
2 in. plain.....	1/2½	9½d.	1/2
2½ in. „	1/3	10½d.	1/4½
3 in. „	1/6½	1/1½	1/8½
3½ in. „	1/11	1/4½	1/11½
4 in. „	2/2½	1/7½	2/4½

*The above R.W. Goods prices are subject to an advance of 5% from October 29th, 1929.

L.C.C. COATED SOIL PIPES—London Prices ex Works.

	Bends, stock angles.	Branches, stock angles.
	s. d.	s. d.
2 in. per yd. in 6 fts. plain	2 5	1 9	2 1
2½ in. „	2 9½	1 10½	2 7
3 in. „	3 0	2 1	2 1
3½ in. „	3 3	2 7	3 7
4 in „	3 8	2 11	4 1½

L.C.C. COATED DRAIN PIPES—London Prices ex Works

	Bends, stock angles.	Branches, Pipe, angles, stock angles.
	s. d.	s. d.	s. d.
3 in. per yd. in 9ft. lengths	3 6	4 6	7 9
4 in. „ „	4 6	5 5	9 3
5 in. „ „	6 3	9 6	15 0
6 in. „ „	7 3	11 6	19 0

Gasket for jointing, 41/- per cwt.

	Per ton in London. £ s. d.		£ s. d.
IRON—			
Common bars.....	11 0 0	to	12 0 0
Staffordshire Crown Bars— Good merchant quality	11 10 0	to	12 10 0
Staffordshire Marked Bars.....	14 0 0	...	15 0 0
Mild Steel Bars	10 0 0	...	11 0 0
Steel Bars, Ferro-Concrete quality, basis price	9 10 0	...	10 10 0
Hoop iron, basis price	11 10 0	...	12 10 0
„ Galvanised	27 0 0	...	28 0 0
Soft Steel Sheets, Black— Ordinary sizes, to 20 g....	11 10 0	...	12 0 0
„ „ „ 24 g....	13 0 0	...	14 0 0
„ „ „ 26 g....	15 0 0	...	16 0 0
Sheets Flat Best Soft Steel, C.R. and C.A. quality— Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 0 0	...	16 0 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.....	16 0 0	...	17 0 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g....	18 0 0	...	20 0 0
No. 1 quality £4 per ton extra.			
Flat and Galvanised Corrugated Sheets— Ordinary sizes, 6 ft. to 9 ft. to 20 g.	15 10 0	...	16 10 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g.	16 0 0	...	17 0 0
Ordinary sizes, 6 ft. to 9 ft. to 28 g.	19 0 0	...	20 0 0
Sheets Galvanised Flat, Best quality— Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	21 0 0	...	22 0 0
Best Soft Steel Sheets, 22 g. and 24 g.	23 0 0	...	25 0 0
Best Soft Steel Sheets, 26 g.	24 10 0	...	25 10 0
Cut Nails, 3 in. to 6 in.....	16 0 0	...	17 0 0
(Under 3 in. usual trade extras.)			

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

LEAD, &c.

(Delivered in London.)	£ s. d.
LEAD—Sheet. English, 4 lb. and up	30 5 0
Pipe in coils	30 15 0
Soil pipe	33 15 0
Compo pipe	24 15 0

NOTE.—Country delivery, 20s. per ton extra ; lots under 3 cwt. 3s. per cwt. extra, and over 3 cwt. and under 5 cwt., 1s. 6d. per cwt extra. Cut to sizes, 5s. cwt. extra.

Old lead, ex London area, at Mills ..... per ton	20 0 0

COPPER.

		s. d.
Seamless Copper tubes (basis).....	per lb.	1 3
Strong sheet	„	1 0
Thin.....	„	1 1
Copper nails	„	1 11
Copper wire	„	2 0

PLUMBERS' BRASS WORK.
Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
29/-	45/-	76/-	153/-	246/-	510/- per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in	2 in.
41/6	62/-	92/-	174/-	300/-	588/- per doz.

RIVER PATTERN SCREW DOWN MAIN FERRULES.

½ in.	¾ in.	1 in.
39/6	60/-	116/6 per doz.

CAPS AND SCREWS.

1½ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
7/6	10/-	14/-	23/-	30/-	42/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in
7/6	11/-	17/-	29/-	36/-	63/- per doz.

BRASS SLEEVES.

1½ in.	2 in.	3 in.	3½ in.	4 in.
10/-	12/-	20/-	24/-	31/- per doz.

NEW RIVER PATTERN CROYDON BALL VALVES, S.F.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.
35/-	56/-	98/-	162/-	228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH BRASS CLEANING SCREW.

	1½ in.	1½ in.	2 in.	3 in.	
8 lbs. P. traps ...	33/-	41/-	56/-	101/-	per doz.
8 lbs. S. traps ...	35/-	45/-	66/-	126/-	„

TIN.—English Ingots, 2/3 per lb. SOLDER.—Plumber's 1/-, Tinman's 1/2, Blowpipe 1/3 per lb.

PAINTS, &c.

Raw Linseed Oil, in pipes	per gallon	0	4 0
„ „ „ in barrels ...	„	0	4 2
„ „ „ in drums ...	„	0	4 4
Boiled „ „ in barrels ...	„	0	4 4
„ „ „ in drums ...	„	0	4 6
Turpentine in barrels	„	0	3 11
„ in drums (10 galls)	„	0	4 1
Genuine Ground English White Lead, per ton		54	0 0

(In not less than 5-cwt. casks.)
Extra for 1-cwt. kegs over 5-cwt. casks is 5/9 cwt

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS (*contd.*

PAINTS, &c. (*contd.*)

		£	s.	d.
GENUINE WHITE LEAD PAINT. "Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganswyte," "Polacco," "J." Brand, and other best brands (in 14-lb. tins) not less than 5 cwt lots per ton delivered ...		73	10	0
Red Lead, Dry (packages extra) ...	per ton	40	0	0
Best Linseed Oil Putty; ...	per cwt.	0	15	6
Filicol ...	"	0	15	6
Size. XD quality ...	ftkn.	0	3	0

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

	Per ft.		Per ft.
15 oz. fourths ...	2½d.	32 oz. fourths ...	6½d.
15 „ thirds ...	3½d.	32 „ thirds ...	9d.
21 „ fourths ...	3½d.	Obscured Sheet, 15 oz.	3½d
21 „ thirds ...	4½d.	„ „ 21 oz.	4½d.
26 „ fourths ...	4½d.	Fluted, 15 oz. 6½d., 21 oz. 9d.	
26 „ thirds ...	6½d.	Em'lled, 15 oz. 4½d., 21 oz. 6d.	

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED plate in CRATES OF STOCK SIZES.

	Per ft.
¼ Rolled plate ...	4½d.
⅜ Rough rolled ...	5½d.
Rough rolled ...	5½d.
Figured Rolled, Baltic, Oceanic, Arctic Stippolyte, and small and large Flemish White...	5½d.
Ditto, tinted ...	8½d.
Rolled Sheet ...	4½d.
White Rolled Cathedral ...	4½d.
Tinned do. ...	6½d.

Cast plate is same price as rough rolled.

VARNISHES, &c.

		Per Gallon £	s.	d.
Oak Varnish ...	Outside	0	14	0
Fine ditto ...	ditto	0	16	0
Fine Copal ...	ditto	0	18	0
Pale Copal ...	ditto	1	0	0
Pale Opal Carriage ...	ditto	1	4	0
Best ditto ...	ditto	1	12	0
Floor Varnish ...	Inside	0	18	0
Fine Pale Paper ...	ditto	0	18	0
Fine Copal Cabinet ...	ditto	1	2	6
Fine Copal Flatting ...	ditto	1	0	6
Hard Drying Oak; ...	ditto	0	18	0
Fine Hard Drying Oak ...	ditto	0	19	0
Fine Copal Varnish ...	ditto	1	0	0
Pale ditto ...	ditto	1	12	0
Best ditto ...	ditto	1	2	6
Best Japan Gold Size ...		0	12	6
Best Black Japan ...		0	10	0
Oak and Mahogany Stain (water) ...		0	12	0
Brunswick Black ...		0	7	6
Berlin Black ...		0	14	0
Knotting (patent) ...		1	5	0
French and Brush Polish ...		0	17	0
Liquid Dryers in Terebine ...		0	9	0
Cuirass Black Enamel ...		0	7	0

HOUSING PROGRESS IN SCOTLAND

THE following figures show the progress that has been made in State-aided housing schemes in Scotland to December 31, 1929 :—

	Completed.	Under construction.
1919 Act	25,129	—
Do. (by public utility societies)	421	—
Private subsidy schemes (1919 Additional Powers Act)	2,324	—
Slum clearance schemes ...	11,022	1,782
1923 Act :—		
By local authorities ...	4,028	2
By private enterprise ...	17,494	1,243
By public utility societies	80	—
1924 Act :—		
By local authorities ...	41,672	5,200
By private enterprise ...	1,431	1,498
By public utility societies	127	—
Demonstration houses ...	17	—
Steel houses erected on behalf of Government by Scottish National Housing Company	2,552	—
	106,297	9,725

NEW BUILDINGS IN SCOTLAND

Argyll.—ROADS.—Great improvements in the roads in Argyllshire have been forecast at a meeting of Cowal District Committee. For work on the road from Arrochar to Mid-Argyll boundary a sum of £132,000 will be spent.

Ayr.—HOUSES. — The Ayr Dean of Guild Court has passed plans for 32 houses in Marchfield-road and Prestwick-road, Ayr, for the Ayr Town Council. The estimated cost is £10,240. Permission has also been granted to the Betting Control Board to erect buildings at Ayr Racecourse to be used as additional pay-out boxes for the totalisator, the estimated cost of which is £800.

Dumbarton.—HOUSES. — The Dumbarton Dean of Guild Court has passed plans for the erection of 120 houses at Brucehill, Cardross-road. The scheme comprises 16 houses of four apartments, 72 of three apartments, and 32 of two apartments. Plans were also passed for a new housing scheme by Dumbarton Building Society, 18 houses of the flatted type to be erected on a vacant site facing Glasgow-road.

Dundee.—BUILDINGS.—Plans and sections of the following proposed new buildings, etc., have been lodged at the Office of the City Engineer :—Bradbury-street—garage for Mr. N. S. Golder, Mr. W. M. Patrick, architect, 26, Yeaman-shore; Candle-lane—petrol tank for Messrs. Lamb's Garage, Ltd., Messrs. Allan & Friskin, architects, 26, Castle-street; Collingwood-crescent—house for Mr. Adam Ramsay, Messrs. Johnston & Baxter, architects, 114, Seagate; Liff-road—house for Mr. John Mathers, Mr. A. Robertson, architect, 18, Union-place; Osborne-place—garage for Mrs. Preston Watson, Messrs. Thoms & Wilkie, architects, 21, South Tay-street; Richmond-terrace—garage for Mr. Wm. Mackie, Messrs. Thoms & Wilkie, architects, 21, South Tay-street; Robson-street—bungalow for Mr. Wm. Black, Mr. W. M. Patrick, architect, 26, Yeaman-shore; Small's Wynd —alterations for the Britannia Cinema (Dundee), Ltd.; Strathmartine-road—alterations for Dundee Eastern Co-operative Society, Ltd.; Strathmartine-road—store for Mr. R. G. Black, Messrs. J. Towe & Co., architects, 104, Commercial-street.

Dundee. — EXTENSION. — A provisional agreement has been reached between representatives of Dundee Town Council and Angus County Council for the extension of Kingsway to Invergowrie at a total cost of £54,000.

East Lothian. — HOUSING. — The East Lothian Western District Committee has approved of a recommendation to accept the offer of Mr. Richard Baillie, builder, Pencaitland, to erect 100 houses for the sum of £30,488. They are to consist of 40 of two apartments, and 60 of three apartments. The new houses are to be built at Prestonpans, Aberlady, Longniddry, Gullane, Dirleton, Elphinstone, and Ormiston. It was resolved to recommend the county council to borrow a further sum of £20,000, in addition to the £40,000 already passed, to meet grants for reconditioning farm cottages under the Housing Rural Workers Act.

Edinburgh.—WIDENING.—The Streets and Buildings Committee of Edinburgh Town Council has recommended the acceptance of the tender submitted by Messrs. Arnott, M'Leod, of Edinburgh, at approximately £5,000, for the proposed widening of Milton-road bridge.

Edinburgh. — SEWER. — The Streets and Buildings Committee of Edinburgh Town Council has recommended acceptance of the tender of Mr. A. M. Carmichael, Saughton Mains, for the middle section of the new sewer from Corstorphine to Granton. The burgh engineer's estimate of the cost of this section was £80,500.

Glasgow. — RECONSTRUCTION. — The Electricity Committee of Glasgow Town Council have considered a £50,000 scheme to reconstruct the central offices in Waterloo-street.

Glasgow.—BUILDING.—For the superstructure of the Central Employment Exchange building, Waterloo-street, Glasgow, H.M.O.W. are inviting tenders for the work. The architect, H.M. Office of Works, 122, George-street, Edinburgh, has prepared the plans.

Kilmarnock. — EXCHANGE. — The Commissioners of His Majesty's Works, etc., are prepared to receive tenders for the erection of a new Employment Exchange at Kilmarnock. The architect, H.M. Office of Works, 122, George-street, Edinburgh, has prepared the plans.

Portobello.—POND.—The Edinburgh Town Council are to consider a proposal for an open-air swimming pond at Portobello. The estimated cost is £30,000.

BUILDING TRADE WAGES IN SCOTLAND*

The following are the present rate of wages in the building trade in the principal towns of Scotland. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers—Masons'‡ Bricklayers'† Plasterers'†
Aberdeen ...	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Airdrie ...	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Alexandria ...	1/7½	1/7½	1/7½	1/8½	1/7½	1/6½	1/8	‡1/2½ †1/2½
Arbroath ...	1/6½	1/6½	1/6½	1/7½	1/6½	1/7½	1/5½	1/1
Ayr ...	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	1/2½
Bathgate ...	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/6½	1/2 to 1/3
Blairgowrie ...	1/7	1/7	1/7	1/7½	1/5	1/7	1/4	10d. to 1/-
Bo'ness ...	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Coatbridge ...	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Dumbarton ...	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Dumfries ...	1/6½	1/6½	1/6½	1/7½	1/6½	1/6½	1/6½	1/2
Dundee ...	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/3 †1/2½
Dunfermline ...	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7½	‡1/2½ †1/2½
Edinburgh ...	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/3 †1/2½
Falkirk ...	1/7½	1/7½	1/7	1/8	1/7	1/7	1/6½	1/2½
Fort William ...	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/2
Galashiels ...	1/6½	1/7	1/6½	1/7	1/6½	1/6½	1/7	1/2
Glasgow ...	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Greenock ...	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7	1/2½
Hamilton ...	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2
Hawick ...	1/7	1/7	1/7	1/7-1/7½	1/7	1/7	1/7	1/2½
Helensburgh ...	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	1/2½
Inverness ...	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/- to 1/2
Kilmarnock ...	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	1/2½
Kirkcaldy ...	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Kirkwall ...	1/5	1/5	1/4	1/5	1/5	1/4	1/4	1/-
Lanark ...	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Leith ...	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/3 †1/2½
Motherwell ...	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2 †1/2½
Perth ...	1/7½	1/7½	1/7½	1/8½	1/8½	1/7½	1/8	‡1/2 †1/2½
Stirling ...	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7½	2½
Stirlingshire (Eastern District) ...	1/7½	1/9	1/7½	1/8½	1/7½	1/7½	1/8	2½ ‡1/2½ †1/2½
Wishaw ...	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	½

* The information given in this table is copyright. The rates of wages in the various towns in England and Wales are given on page 322.

CURRENT PRICES FOR BUILDING WORK IN LONDON*

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	11	0
Add if in clay	" "	1	0
Add for every additional depth of 6 ft.	" "	0	6
Planking and strutting to trenches	per foot super	0	5
Do. to sides of excavation, including shoring	" "	1	0

CONCRETOR.

		s.	d.
Portland cement concrete in foundation 1 to 6	per yard cube	38	0
Add if in underpinning in short lengths	" "	7	0
Add if in floors 6 in. thick	" "	3	3
Add if in beams	" "	3	3
Add if aggregate 1 : 2 : 4	" "	10	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	" "	2	6

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	32	0	0
Add if in stocks	"	7	10	0
Add if in Staffordshire blues	"	22	0	0
Add if in Portland cement and sand	"	1	10	0

FACINGS.

			s.	d.
Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	0	1½

POINTING.

			s.	d.
Neat flat struck or weathered joint	"	0	0	3

ARCHES.

			s.	d.
Extra only to the price of ordinary brickwork :—				
Fair external in half brick rings	" "	0	0	10
Axed in stocks	" "	0	1	9
Rubbed and gauged jointed in putty camber or segmental	" "	0	6	0

SUNDRIES.

			s.	d.
Damp course in double course of slates breaking joint and bedded in Portland cement	" "	0	1	0
Setting ordinary register grates and stoves	each	1	0	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks	"	4	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard super	4	6
Three-quarter-inch vertical damp course	" "	9	6
Three-quarter-inch on flats in two thicknesses	" "	6	3
Angle fillet	per foot run	0	3
Skirting and fillet 6 in. high	" "	1	2

MASON.

		s.	d.
York stone templates fixed	per foot cube	13	0
York stone sills fixed	" "	22	0
Bath stone and all labour fixed	" "	10	6
Beer stone and all labour fixed	" "	15	0
Portland stone fixed	" "	20	0

SLATER.

		s.	d.
Welsh 16 in. × 8 in. 3 in. lap, including nails	per square	72	9
Do. 20 in. × 10 in. Do. Do.	"	80	9
Do. 24 in. × 12 in. Do. Do.	"	90	0

CARPENTER AND JOINER.

			s.	d.
Fir framed in plates	per foot cube		5	0
Do. joists	" "		5	6
Do. roofs, floors and partitions	" "		6	0
Do. trusses	" "		8	6

		⅞"	1"	1½"	2"
Deal rough close boarding	per sq.	35/6	40/-	45/-	72/-
Flat centering for concrete floor, including struts or hangers	"				50 0
Do. to beams	per ft. sup.				0 11
Centre for arches	"				1 6
Gutter boards and bearers	"				1 0

FLOORING.

		⅞"	1"	1½"	1½"
Deal edges shot	per sq.	—	44/6	53/-	60/6
Do. tongued and grooved	"	—	49/-	57/6	65/-
Do. matchings	"	45/-	51/-	—	—
Moulded skirting, including backings and grounds	per ft. sup.	1/6	1/9	2/-	2/6

SASHES AND FRAMES.

		s.	d.
One-and-a-half moulded sashes or casements	per foot super	1	10
Two Do. Do. Do.	" "	2	1
Add for fitting and fixing	" "	0	3
Deal-cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2 in. moulded sashes in squares, double hung, double hung with pulleys, lines and weights ; average size	"	3	9

DOORS.

		1¼"	1½"	2"
Two-panel square framed	per ft. sup.	2/1	2/4	2/6
Four-panel Do.	"	2/5	2/8	2/11
Two-panel moulded both sides	"	2/8	2/11	3/2
Four-panel Do. Do.	"	2/11	3/2	3/5

CARPENTER AND JOINER—continued

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	14	0

		1"	1¼"	1½"
Plain deal jamb linings framed	per ft. sup.	1/7	1/8	1/11
Deal shelves and bearers	"	1/4	1/6	1/9
Add if cross-tongued	"	2d.	2d.	2d.

STAIRCASES.

		1"	1¼"	1½"	2"	2½"
Deal treads and risers in and including rough brackets		2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed		1/8	2/-	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. × 1¼ in.	per ft. run	0	9
Mahogany handrail : average, 3 in. × 3 in.	" "	6	0
Add if ramped	" "	12	0
Add if wreathed	" "	24	0

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/-
Sash fasteners	11½d.	Mortice locks	4/6
Casement fasteners	1/5	Patent spring hinges and letting into floor and making good	19/-
Casement stays	1/2		
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	16	3
Plain compound girders	"	19	0
Do. stanchions	"	21	9
In roofwork	"	27	6

RAIN-WATER GOODS.

		3"	4"	5"	6"
Half-round plain rebated joints	ft. run	1/6	1/9	2/-	2/6
Ogee Do. Do.	"	1/9	2/-	2/6	3/3
Rain-water pipes with ears	"	1/9	2/7	—	—
Extra for shoes and bends	each	4/4	5/11	—	—
Do. stopped ends	"	1/11	2/4½	3/7	4/-
Do. nozzles for inlets	"	2/2	2/7	3/10	4/3

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	44	0
Do. Do. in flats	"	43	0
Extra labour and solder in coated cesspools	each	6	9
Welf joint	per ft. run	0	6
Soldered seam	" "	1	3
Copper nailing	" "	0	3

		½"	¾"	1"	1½"	2"	4"
Drawn lead waste	per ft. run	1/2	1/9	2/-	3/4	4/-	—
Do. service	"	1/8	2/2	2/7	3/10	—	—
Do. soil	"	—	—	—	—	—	6/9
Bends in lead pipe	each	—	—	—	—	3/3	8/2
Soldered stop ends	"	1/2	1/8	2/1	2/10	3/6	—
Red lead joints	"	11d.	1/-	1/3	1/11	2/4	4/10
Wiped soldered joints	"	2/10	3/6	4/-	4/11	6/6	9/9
Lead traps and cleaning screws	"	—	—	—	14/7	19/6	—
Bib cocks and joints	"	6/4	9/7	15/4	41/-	—	—
Stop cocks and joints	"	15/4	17/2	25/8	64/-	—	—

PLASTERER.

			s.	d.
Render, float and set in lime and hair		per yard sup.	2	6
Do. Do.	Sirapite	" "	2	9
Do. Do.	Keen's	" "	4	0
Add saw lathing		" "	1	7
Add metal lathing		" "	2	6
(Not including hangers or runners, etc. for suspended ceilings.)				
Portland cement screed		" "	2	2
Do. plain face		" "	3	3
Mouldings in plaster		per 1 girth	0	1½
One-and-a-half granolithic paving		per yard sup.	5	6

GLAZIER.

		s.	d.
21-oz. sheet plain	per foot sup.	0	8½
26-oz. Do.	" "	1	0
Obscured sheet	" "	1	1
⅛-in. rolled plate	" "	0	9
¼-in. rough rolled or cast plate	" "	0	10½
¼-in. wired cast plate	" "	1	4

PAINTER.

		s.	d.
Preparing and distempering, 2 coats	per yard sup.	0	9
Knotting and priming	" "	0	7
Plain painting, 1 coat	" "	0	9
Do. 2 coats	" "	1	2
Do. 3 coats	" "	1	9
Do. 4 coats	" "	2	4
Graining	" "	2	3
Varnishing twice	" "	1	9
Sizing	" "	0	3
Flatting	" "	0	7
Enamel	" "	1	1
Wax polishing	per foot sup.	0	6
French polishing	" "	1	2
Preparing for and hanging paper	per piece, 2/- to 4/-		

These prices apply to *new buildings only*. They cover superintendence by foreman and carry a profit of 10% on the prime cost without establishment charges. A percentage of 1½ should be added for Employers' Liability and National Health and Unemployment Acts and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

TRADE NEWS

A REFRIGERATION CONVENTION.

Messrs. Kelvinator, Limited, manufacturers of automatic electric refrigerators, of 258, Gray's Inn-road, W.C.1, held a convention of salesmen and others interested at the Holborn Restaurant on January 31, where visitors assembled after a reception at Gray's Inn-road, being welcomed by Mr. Ralph Searle, managing director. Questions of policy took up the major part of the morning, after which the new "Kelvinator" models for 1930 were inspected. These, we learn, represent the most advanced achievements in household refrigeration, being fitted with the new ice-o-thermic tubes. "Kelvinator" refrigerators work automatically by electricity by being simply connected to a wall plug. Food placed within neither freezes nor deteriorates. The operation is entirely automatic, as the refrigerator switches itself on or off as the temperature demands it, thus saving unnecessary use of electric current. It is silent in operation, clean, and of neat appearance.

It is hardly too much to say that the time has now arrived when refrigeration should find a place in every home as a necessity, no less than gas or electricity. Food deterioration carries with it subtle dangers to health. Yet food must not be frozen since freezing lessens its nutritive flavours and palatability and destroys its vitamin value. "Kelvinator" models, we learn, by means of a new discovery, enable the user to get four distinct degrees of cold within the same cabinet and at the same time—all wholly automatic. Architects for most classes of flats and for restaurants, schools, hospitals, etc., should be interested in the subject.

Scaffolding Firm's Extension.

We learn that, owing to the expansion of Messrs. Scaffolding (Great Britain), Ltd.'s business, it has been decided to remove to larger offices. This company's new head office address is now 344-360, South Lambeth-road, S.W.8 (Tel.: Brixton 2340-1, and T.A.: "Scaffixer, Clapham-road, London"). The existing London premises will be retained for works and other purposes.

A Rolling Shutter Contract.

We learn that Messrs. Dennison, Kett and Co., Ltd., of 11, Queen Victoria-street, E.C.4, have obtained the contract for 64 of their rolling shutters for despatch to Nairobi.

Projector Lamps

We have received a copy of a newly-issued list of Osram projector lamps. The development of the Osram gasfilled projector lamp has opened up an entirely new chapter in the art of light projection. On the front page of this catalogue are some interesting points in regard to the advantages of these lamps when used for particular lighting requirements. We learn that it forms the latest and most satisfactory solution of the problem of obtaining a concentrative source of light, such as is necessary for many optical, photographic, kinematographic, stage and surgical purposes. Architects concerned with these classes of buildings can obtain further details from the G.E.C., Magnet House, Kingsway, W.C.2.

OBITUARY

THE death occurred on Friday of Mr. Thomas Byford, who was a member of the builders' merchants firm of Messrs. Byford Bros., of Southend-on-Sea. He was a brother of Sir John Byford, and before going to Southend thirty-two years ago he was a member of the firm of John Byford and Sons, of Poplar. He was prominent in Freemasonry circles, and in 1905 was elected as Worshipful Master of the Priory Lodge. During the war Mr. Byford was a quartermaster in the local Volunteer Battalion. He was always interested in sport, and belonged at one time to the Essex County Bowling Club, and was formerly a director of Southend United Football Club. He was 62 years of age.

NEWS ITEMS

Building Trade Wages: Unofficial Strike.

As a protest against a reduction in wages under the cost-of-living sliding scale some members of the Amalgamated Union of Building Trade Workers employed in the South London area left their work on Saturday. The National Joint Council of the industry on January 24 agreed that from Saturday the rates of wages of craftsmen and labourers in the building industry should be decreased by ½d. an hour, provided that the rates payable to labourers were not less than 75 per cent. of the craftsmen's rate. Notice to this effect was given to all building employees in London by the London Master Builders' Association. Mr. R. Coppock, secretary of the National Federation of Building Trade Operatives, stated that the stoppage was quite unofficial.

A Calendar.

We acknowledge with thanks the receipt from Messrs. Callender's Cable and Construction Co., Ltd., of a calendar showing a fine view in colour of the Golden Temple, Amritsar, India.

Electrical Industry Wages.

In accordance with the National Wages Agreements, the wages in the electrical contracting industry will be subject to an increase. Grade A is increased by ¾d. to 1s. 11d., and grades B, C and D by ½d. to 1s. 7¾d., 1s. 6½d. and 1s. 4¼d. respectively. The above rates will come into effect on the second pay day in February, for the period covered by that pay day, and for Grades B, C and D, will remain current up to and including the period covered by the first pay day in June, 1930.

Dunstable Housing Development.

Dunstable (Beds) Town Council has decided to purchase sites in Dunstable for the erection of just over 300 houses. This was the sequel to the Council being informed that the printing firm of Messrs. Waterlow & Sons, Ltd., are about to extend their works.

SCIENTIFIC METHODS OF SANITATION

A LECTURE on the application of scientific principles to modern sanitation was given at the Borough Hall, Guildford, recently by Lieut.-Col. S. H. Page, of Ramsgate. It was one of a series arranged by the West Surrey Building Trades Employers' Association, and was largely attended by builders and others.

Mr. Stanley Ellis, President of the Association, said when some of them were boys, sanitation and drainage were practically unknown. Less than 40 years ago the town of Guildford was without any proper system of drainage.

Colonel Page prefaced his remarks by saying that the sanitarian's ideal was to get rid of all polluted matter into a rapidly flowing stream which then swept it away without any impediment of traps, but he pointed out that under modern conditions that was impossible. Speaking of the advantages and disadvantages of intercepting traps, he said there had been an outcry against them, and a Royal Commission sat to see if they could be dispensed with on the grounds that they were an impediment. One town persuaded the Ministry to allow them to develop a new suburb without the intercepting trap. Sickness arose, intercepting traps were then installed in the suburb, and the statistics had now fallen to the level of the remainder of the town. The lecturer asserted that a 4 in. intercepting trap was ample, and that a larger one in effect formed a small cesspool. In the laying of drains he advocated the use of mirrors to see that they were properly laid.

TENDERS

Received too late for Classification.

Athlone.—Eight houses at Athlone, Co. Westmeath, for the Irish Sailors' and Soldiers' Land Trust. Mr. W. J. Brown F.R.I.B.A., architect, 80, Upper Mount-street, Dublin:—

*J. J. Murphy (Athlone), Ltd.	£4,717 19 11

Didcot.—New senior Council school:—

R. Jones, Caerphilly	£13,404 0 0
Canning & Sargeant, Wokingham	12,348 7 6
Limpus & Son, Kingston-on-Thames	12,173 0 0
McCarthy Fitt, Reading	11,899 0 0
Froud & Barrett, Wokingham	11,516 2 8
Crosby & Co., Farnham	11,448 15 8
Organ & Son, Oxford	11,441 12 3
Hinkins & Frewin, Oxford	11,364 0 0
A. E. Guest, Ltd., London	11,326 6 0
Francis Bros., Tilehurst	11,234 7 1
Brasher & Sons, Wallingford	11,035 18 4
Norris & Co., Sunningdale	10,931 0 0
Smallbone & Sons, Streatley	10,915 0 0
Cox & Sons, Abingdon	10,900 0 0
Boshers, Ltd., Cholsey	10,723 0 0
Building & Public Works Co., Swindon	10,296 14 2
‡Blake Bros., Didcot	10,160 14 0

East Preston.—Pointing the front door porches and repairs to cottages at Rustington and Clapham, for the R.D.C. Mr. R. E. Booker, building surveyor:—

W. H. Hamper, East Preston	£450 0 6
C. Swain, Rustington	291 11 6
Drake & Co., Rustington	228 0 0
A. Clare & Co., Worthing	178 10 0

London.—Nurses' home and houses at Springfield Mental Hospital, Beechcroft-road, Upper Tooting, S.W.17, for the Middlesex C.C. Mr. W. T. Curtis, F.R.I.B.A., County Architect:—

L. & W. Whitehead, Ltd., London	£39,849
William Lacey, Ltd., Hounslow	38,490
J. Carmichael, Ltd., London	37,987
Dove Brothers, Ltd., London	37,966
Walter Lawrence & Son, Ltd., London	37,917
Higgs & Hill, Ltd., London	37,837
C. Miskin & Sons, Ltd., St. Albans	37,517
J. Dorey & Co., Ltd., Brentford	37,424
John Laing & Son, Ltd., London	37,180
Albert Monk, Edmonton	36,780
Holloway Bros., Ltd., London	36,567
‡Henry Knight & Son, Tottenham	36,410

March.—Extensions to the Grammar School, for the Isle of Ely E.C. Mr. R. D. Robson, A.R.I.B.A., School Architect, County Hall, March. Quantities by the School Architect:—

F. W. Shanks, Hunstanton	£4,879 1 7
Rose & Sons, Whittlesey	4,638 7 9
W. & W. G. West, Wisbech	4,638 0 0
L. Wilkinson, March	4,574 0 0
J. Guttridge & Sons, Peterboro'	4,535 0 0
B. Lofts & Sons, Littleport	4,505 16 5
Bristow & Melton, Chatteris	4,434 11 9
H. G. Payworth & Son, March	4,256 0 0
E. T Currington, Wisbech	4,242 0 0
*J. Eggitt & Sons, March	4,109 0 0

TENDERS

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Tuesday evening.

†‡ Denotes accepted.
† Denotes provisionally accepted.
‡ Denotes recommended for acceptance.
§ Denotes accepted subject to modifications.
¶ Denotes accepted by H.M. Office of Works and H.M. War Office.

Aberdeen.—Twenty houses (Second Development) at Craigton, Culter, for the D.C. of the C.C. Mr. W. Park, architect, 7, Bon Accord-square, Aberdeen. Quantities by the architect:—

Mason—			
*J. Clark, Culter	£3,045	0	0
Carpenter—			
*Alex. Thomson, Culter	1,650	0	0
Slaters—			
*R. Shaw & Son, Culter	460	0	0
Plasterers—			
*Coutts & Leask, Aberdeen	1,007	8	0
Plumber—			
*A. Taylor, Aberdeen	964	14	6
Painters—			
*Stevenson & Son, Aberdeen	145	0	0

Abram.—Pithead baths at Maypole Colliery:—
*Darbyshire Jackson & Co., Ltd., Wigan £17,200

Accrington.—Mill premises and extensions to the works at Woodnook, for Messrs. Higham's, Ltd., cotton spinners. Mr. E. J. Crabtree, architect, Permanent-chambers, Victoria-street, Nelson:—
*Phœnix Construction Co., Ltd., Manchester.

Auchincruive.—Building for the Hannah Dairy Research Institute for the Board of Agriculture:—
*W. Govan & Sons, 79, Main-street, Prestwick.

Bath.—Repairs to 1, Edgar-buildings, for the C.B.:—
*F. J. Amery & Son, Ltd. £175

Belmont.—New cycle shed and gatekeepers' office, at the laboratories, for the M.A.B.:—

W. F. Goodchild, London	£208
W. Griffiths, Sons & Cromwell, Ltd., London	200
*H. H. & F. Roll, Ltd., High-street, Epsom	182

Birmingham.—New school at Dulwich-road, Perry Barr, with accommodation for 1,568 children, for the E.C.:—
‡Parsons & Morrin, Ltd., 133, Belgrave-road, Birmingham £45,983

Birmingham.—School for 816 juniors and infants at Twickenham-road, Perry Barr, for the E.C.:—
‡J. Dallow & Sons, Blackheath, Birmingham £21,930

Birmingham.—Staff and stockrooms at Windsor-street Council school, for the E.C.:—
‡J. E. Williams, Birmingham £878

Birmingham.—Staffroom at Dartmouth-street Council school, for the E.C.:—
‡L. Gorton, Birmingham £564

Birmingham. — Rebuilding Floodgate-street Cleansing centre, for the E.C.:—
‡F. N. Adams, Birmingham £797

Birmingham.—Remodelling existing latrines and providing additional latrine accommodation where required at (1) Fox-street Council school; and (2) Windsor-street Council school:—

(1)—	
‡F. N. Adams, Birmingham	£314
(2)—	
‡J. E. Williams, Birmingham	966

Birmingham.—Classrooms at (1) Twickenham-road, Perry Barr; and (2) at Tinkers Farm-road, Northfield, temporary schools, for the E.C.:—

(1)—	
‡Harrison Smith Buildings, Ltd., Birmingham	£897
(2)—	
‡Harrison Smith Buildings, Ltd., Birmingham	910

Birmingham.—Extensions to the premises of Messrs. Harrison (Birmingham), Ltd., Bradford-street. Messrs. Harrison & Cox, architects, Colmore-row:—
*S. F. Swift & Sons, Ltd., Alcester-street.
Steelwork—*C. Wade & Co., Ltd., Aston-road.

Blackpool.—Extensions to the Westminster Bank premises at Bond-street, South Shore:—
*Hogarth & Pollard, Ltd.
Asphalters—*Tunstalls Rock Asphalte Co., Ltd.

Bradfield.—Alterations to the Bradfield Poor Law Institution, for the B.G. Mr. W. Sargeant, architect, Shire Hall, Reading:—
*T. L. Hillier, Bradfield £560

Branstv.—New school, for the Whitehaven Corporation. Borough Engineer and Surveyor. Quantities by Mr. J. S. Stout, Lowther-street, Whitehaven:—

E. Moorhouse & Sons, Whitehaven	£11,863 15
Thos. Johnston, Workington	11,531 4
Jas. Leslie & Sons, Whitehaven	10,517 14
*Border Engineering Contractors, Ltd., Whitehaven	9,907 0
Thos. Armstrong & Co., Cockermouth	9,589 0

(Subject to approval of B. of E.)

Bristol.—Alterations to shopfront at 12, Union-street, for Messrs. Smart Brothers, Ltd., 10-14, Charterhouse-street, Holborn-circus, E.C.1:—
*A. Edmonds & Co., Ltd., Constitution Hill, Birmingham.

Burnham.—Repair and repainting the Parish Council Offices and fire station, for the P.C.:—
*W. Broomfield, High-street, Burnham Beeches.

Carwell (Staffs).—Alterations to the "Bassett's Pole" public-house, for Messrs. F. Smith, Ltd., Aston Model Brewery, Birmingham. Mr. H. W. Hobbins, A.R.I.B.A., architect, 33, Newhall-street, Birmingham:—
*J. R. Deacon, Lichfield.

Caterham.—Installation of electric lighting and telephone in "The Firs," at the Mental Hospital, for the M.A.B.:—

F. Polden & Co., Ltd.	£225 10
T. Clarke & Co., Ltd.	220 0
Buchanan & Curwen	215 0
Toy & Winslow	208 0
Read & Partners, Ltd.	195 10
W. J. Furse & Co., Ltd.	195 10
*L. G. Tate & Co., Ltd., 20, Bucklersbury, E.C.	184 10

(All of London.)

Darenth.—New piggeries, etc., at the Training Colony, for the M.A.B.:—

G. Jones & Son	£4,039
H. Munson	4,012
C. H. Boyd & Son, Ltd.	3,243
E. Proctor & Sons	3,100
Thomas Carrington & Co., Ltd., Beckenham	3,079
G. H. Dibblin, Dartford	2,987
P. Miller & Son, Dartford	2,756
*D. C. Bowyer, Heron Works, Belvedere	2,654

(Remainder of London.)

Denbigh.—Eighteen houses in the Townsend area of the town, for the T.C.:—
*Hugh Lloyd Jones, Denbigh £6,763

Dewsbury.—Additions to dye house in Huddersfield-road, for Messrs. J. Smith & Sons (Cleaners), Ltd. Mr. T. W. Sharpe, L.R.I.B.A., architect, Huddersfield-road:—
Mason—*E. Kirby, Ravensthorpe.
Joiners—*Wortley & Boothroyd, Dewsbury.
Plumber—*J. A. Schorah, Ravensthorpe.
Slater—*J. Kellett, Morley.

Didsbury.—Alterations and additions to the "Dog and Partridge" public-house, Wilmslow-road, for Messrs. Groves & Whitnall, Ltd., Regent-road Brewery, Salford. Col. George Westcott, F.M.S.A., architect, Game Cock-chambers, Bridge-street, Manchester:—
*Peace & Norquoy, Ltd., Ancoats, Manchester.

Didsbury.—Demolition and erection of new premises in Wilmslow-road, for Mr. A. C. Mills, motor engineer:—
*J. & J. Parish, Ltd., Withington, Manchester.

Elgin.—Ladies' room in Fife Arms Close, for the T.C. Mr. A. A. Turriff, Burgh Surveyor:—

Builder—			
*E. Hay, King-street	£218	9	
Carpenter—			
*W. H. M. Killigan, Greyfriars-street	264	13	
Plumber—			
*J. Davidson, Mayne-road	112	14	

(All of Elgin.)

Erpingham.—Conveniences at (*a*) Overstrand and (*b*) East Runton, for the R.D.C. Mr. A. R. Tuddenham, Sanitary Inspector, St. Peter's-road, Sheringham:—

(*a*)—	
W. Reynolds, Overstrand	£574
Watson & Kirby, Cromer	310
F. Golden, Northrepps	308
*Girling & Smith, Cromer	300
(*b*)—	
Watson & Kirby, Cromer	310
A. G. Brown, Runton	305
Girling & Smith, Cromer	296
W. Anderson, Sheringham	288
*—. Virgile, East Runton	255

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Fairhaven (Lancs).—Vicarage for the Wardens and Vicar of St. Paul's Church. Messrs. Taylor & Young, F. & A.R.I.B.A., architects, 19, Chapel-walks:—
*J. E. Myerscough, Ltd., Lytham

Finedon.—4 houses on the Burton-road, site for the U.D.C. Mr. W. E. Lloyd, surveyor:—

W. Packwood & Son, Rushden	£1,903
J. Streather & Son, Corby	1,900
A. F. Keach, Burton Latimer	1,896
F. Sutcliffe, Higham Ferrers	1,880
Hacksley Bros., Ltd., Wellingborough	1,820
W. Loakes & Son, Thrapston	1,768
Childs & Co., Finedon	1,740
Freeman & Son, Oundle	1,722
R. Marriott, Rushden	1,713
W. Thompson & Sons, Ltd., Irthlingborough	1,711
*A. P. Lewis & Son, Burton Latimer	1,680

Garston (near Watford).—New County Council School, for the Herts C.C. Mr. A. Ernest Prescott, County Surveyor's Office, Hatfield:—

F. C. Slough, Barnet	£23,677 0
King & Stannard, Whetstone	23,446 0
G. H. Dibblin, Dartford	22,700 0
R. Ginn & Sons, Hertford	21,550 0
W. Shurmur & Sons, Ltd., London	20,973 0
Clifford & Gough, Watford	20,887 0
H. Pickrill, Wealdstone	20,586 0
F. Hitch & Co., Ware	20,500 0
G. & J. Waterman, Ltd., Watford	20,446 0
Payne Bros., Leavesden	19,970 0
Clark Bros., Ltd., Watford	19,737 0
A. H. Winter & Sons, Harpenden	19,707 0
H. E. Winskell, Barnet	19,596 15
Ekins & Co., Hertford	19,550 0
Bracey & Clark, Ltd., Watford	19,515 1
A. Carter (Luton), Ltd., Luton	19,150 0
Chas. Brightman & Son, Ltd., Watford	19,126 4
W. F. Bailey, Hitchin	19,058 16
Bosworth & Wakeford, Ltd., Daventry	18,559 8
H. C. Janes, Ltd., Luton	18,542 12
*J. Guttridge & Sons, Ltd., Peterborough	17,987 0

Guildford.—44 houses on the Shepherd's-hill housing estate, for the T.C. Mr. J. W. Hipwood, Borough Surveyor:—

Bennett Bros., Letchworth	£15,199
W. Townson & Sons, Bolton	15,990
W. Tarrant, Byfleet	14,696
Punter & Leclerq, Farnham	15,540
E. Clark & Sons, Mowbray	16,074
Guildford and District Guild of Builders, Ltd., Guildford	14,658
*H. Ashenden, Guildford	14,400
A. E. Guest, Ltd., London	14,200

High Wood.—Verandah and balcony and internal alterations to Poplars Cottages, 5 and 6, at the Hospital, for the M.A.B.:—

L. Kazak & Co., London	£1,475
R. Woollaston & Co., London	1,404
J. Gowers, Chelmsford	1,360
Stanley & Sons, London	1,327
Simms (Builders), Ltd., London	1,212
*Frank E. Smith, Oak Lodge, Chestnut-avenue, Grays	1,000

High Wycombe.—Additions at the Girls' High school at Daws Hill Lodge. Mr. W. A. Forsyth, architect, 12, Stratford-place, W.1:—
*Welwyn Builders, Ltd., Bridge-road, Welwyn Garden City, Herts £42,590

Hoddesdon.—Seven houses at Rye Park, for the U.D.C. Mr. W. Plumpton, architect and surveyor:—

W. J. Haward, Hoddesdon	£4,175 0
J. W. Nicholls & Co., Hoddesdon	2,663 10
Heywood & Bryett, Finchley	2,590 0
Sir William Prescott & Sons, Ltd., Tottenham	2,585 0
F. C. Slough, Barnet	2,467 10
W. W. G. Parker, High Ongar	2,290 0

Horden.—Pit-head baths at Horden Colliery, to accommodate 4,000 miners, for the Central Welfare Committee:—
William Hall & Co., Ltd., Gateshead £35,000

Kendal.—Improvements and widening of Levensbridge, for the Westmorland C.C. Messrs. L. G. Mouchel & Partners, consulting engineers, Trinity-buildings, New Bridge-street, Newcastle-on-Tyne:—
*J. Lant, Ltd., Newcastle-on-Tyne.

Kingston-upon-Hull. — Wood fencing along boundaries of Wolfreton-lane and Swine Bank extension, 3,760 yards; Loatley's-lane, 6,740 yards; Endyke-lane, 5,220 yards; Hall-road extension, 2,100 yards; for the T.C. Mr. T. Thomas, City Engineer:—

Hall-road extension—			
*A. Lison, Temple-street, Hull	£833	15	5
Endyke-lane—			
*J. F. W. Garrett & Co., York-street, Hull	2,112	0	0
Loatleys-lane, Wolfreton-lane, and Swine Bank extension—			
*City Engineer	2,601	0	0

Letchworth.—50 non-parlour houses near Icknield-way, for the U.D.C. Mr. Geo. T. Hill, surveyor:—
*G. Saul & Sons, Ltd., Rotherham ... 16,750

Leyland.—New grammar school, for the Lancashire County E.C.:—

*J. Whittaker & Sons, Ltd., Blackburn £36,950

Linslade.—House at the Council's Water Pumping Station, Soulbury-road, Linslade, for the U.D.C. Mr. Harold A. Rolls, L.R.I.B.A., chartered architect, 15, Bridge-street, Leighton Buzzard:—

E. Adams, Harpenden £746
A. E. Dawson 649
G. Alcock 645
D. Cook & Sons 628
W. G. Willis & Son 594
A. E. Sear 583
*O. H. Gates, Springfield 580
(All of Leighton Buzzard.)

Liverpool.—Interior painting of the male and female inspectors' offices, Crosshall-street, for the T.C.:—

*J. A. Milestone & Son, Ltd., 2, Carruthers-street, Liverpool £110 10

Liverpool.—Provision of storage for X-ray films at (a) Rice-lane, Walton, Poor Law Institution, (b) Alder Hey Hospital, (c) Mill-road Infirmary, (d) Smithdown-road Institution, for the West Derby B.G. Mr. E. B. Bailey, L.R.I.B.A., architect, 34, Castle-street:—

(a and b) W. Griffiths, Sons & Cromwell, Ltd., Liverpool.
(c and d) W. Tomkinson & Son, Liverpool.

Liverpool.—Reinstatement of the wall of 28 Moor-street, for the T.C.:—

*Pierce Williams & Son, 141, Upper Warwick-street, Liverpool £195

Liverpool.—Repairs and redecorations at 69 Myrtle-street, for the T.C.:—

*Dutton & Sons, Ltd., 21, Mulberry-street, Liverpool £164

Liverpool.—Alterations and additions at Quarry Bank Maternity and Rest Home, for the T.C.:—

*J. Rummer, 70a, Low Hill, Liverpool £5,094

Liverpool.—Electric sub-station in Hawthorne-road, Bootle, for the T.C.:—

*Bragg & Collins, Fazakerley-road, Walton, Liverpool £936

Liverpool.—Tramway shelter at the junction of Carisbrooke-road and County-road, Walton, for the T.C.:—

*W. D. Williams, 32, Clifton-road, Tuebrook, Liverpool £270

Liverpool.—Interior cleaning and painting rooms at the museums, for the T.C. Land Steward and Surveyor:—

*R. & J. Tilley, 41, Oriel-road, Bootle £428 10

Liverpool.—Reconditioning roof lights at the museums, for the T.C. Land Steward and Surveyor:—

*Tippin Bros., 175, Walton Village, Liverpool £158 18

Liverpool.—For (a) Erection of "The Richmond" school; (b) two additional classrooms, Mossplts-lane; and (c) alterations and additions, for the E.C.:—

(a) *J. Rummer £9,797
(b) *Rummer Bros. 1,314
(c) *Brown & Backhouse 896

Liverpool.—Piggery at Fazakerley Sanatorium, for the T.C. Land Steward and Surveyor:—

*J. Lewis, 13a, Laurel-road, Fairfield, Liverpool £1,875

Liverpool.—Alterations to the Sanatorium block of Ward "H," at the Fazakerley Isolation Hospital, for the T.C.:—

*Bragg & Collins, Fazakerley-road, Liverpool £150

London.—New dressing pavilion for girls and improvements of the dressing accommodation for boys at the Roehampton playing fields, for the L.C.C.:—

*Triggs & Co., Ltd. £781

¶London.—The following contracts, over £500 in value, have been entered into by H.M.O.W. during the week ended the 25th ultimo:—

Sutton Sorting Office—extension—H. H. & F. Roll Ltd., High-street, Epsom.
Belfast New Law Courts—vacuum cleaning equipment—G. N. Haden & Sons, Ltd., 60, Kingsway, W.C.2.
National Physical Laboratory—erection of air tunnel building—H. H. & F. Roll, Ltd., High-street, Epsom.
Edinburgh Scottish National Portrait Gallery and Museum of Antiquities—electric passenger lift—Medway's Safety Lift Company, Limited, 1-2, Silex-street, Blackfriars-road, S.E.1
Greenwich Park—formation of children's boating pond—Meers Brothers, 9, Weardale-road, S.E.13.
Coventry S.O.—alterations—W. A. Player & Son, 77, Sarlesdon-avenue, Coventry

London.—Repairs to roofs damaged in the recent gales, for the M.A.B.:—

Grove Park Hospital—
A. W. Allard & Co., Ltd. £184 0
L. Kazak & Co. 174 10
Roberts, Adlard & Co. 169 10
*J. Macquire 119 12

Grove Hospital—
H. P. Smith, Ltd. 162 10
Williams, Smith & Evans 158 13
L. Kazak & Co. 158 2
J. J. Etridge, Junior, Ltd. 135 15
*J. Macquire 112 0

London.—Adaptation of 49, Bow-road for schoolkeeper's quarters and administrative purposes for the Bow-road day open-air school, and adaptation work of the school premises, for the L.C.C.:—

W. J. Clemens £1,700
G. B. Farrar & Co. 1,645
George Barker 1,601
Turnbull & Son 1,594
W. J. Dixon & Sons 1,587
C. P. Roberts & Co., Ltd. 1,563
A. E. Symes, Ltd. 1,550
R. Woollaston 1,494
Richard James Truscott 1,487
*J. and C. Bowyer, Ltd., Upper Norwood, S.E.19 1,287
Architect's estimate 1,293
(All of London.)

¶London.—The following contracts have been entered into by H.M.O.W. during the week ended the first instant:—

Birtley Housing Estate—external painting—A. Robertson & Son, 36, Leazes Park-road, Newcastle-on-Tyne.
Wisbech Post Office and Telephone Exchange—erection—John Cracknell, Ltd., Huntley-grove, Peterborough.
Walton-on-Thames P.O. Engineer's Store—erection of garage—J. Poulton, 51, High-street, Addlestone.
Hull B.P.O.—erection—Hinch Bros., Ltd., 15 Wright-street, Hull.
Lyminge T.E.—erection—J. B. Sharman, West Cliff-road, Ramsgate.
Hawick Post Office—alterations and additions—Oliver & Pennycook, Croft-road, Hawick.
Sunderland T.E.—installation of H.W. heating system—Steel & Co., Ltd., Sunderland

London.—Alterations to exits from wards, etc., at Orchard Hospital, for the M.A.B.:—

G. H. Dibblin, Dartford £319 0
J. Scott Fenn, Ltd., London 264 10
G. Jones & Son, Liverpool 244 0
*E. Proctor & Sons, 326, High-street, Plumstead, S.E. 240 0

Maidstone.—New offices, for the Corporation Borough Surveyor:—

*H. H. Goodsell, 13, Albert-street, Maidstone £2,996

Manchester.—Additions to Ducie-avenue, Central Municipal school, Chorlton-on-Medlock, for the E.C.:—

*E. Marshall & Sons, Ltd., Ashton-under-Lyne.
Terra cotta—*King Brothers (Stourbridge), Ltd.

Manchester.—Pointing brickwork and repairing roof at the Chief Fire Station, London-road, for the T.C. Mr. H. Price, A.R.I.B.A., City Architect:—

*S. P. Bidder & Co., Manchester.
(Subject to approval.)

Manchester.—Building comprising a market hall and 4 lock-up shops on Barlow Moor-road, Chorlton-cum-Hardy, for Mr. J. A. Taylor. Mr. E. Dawson, F.S.I., A.M.S.A., architect, 49, Deansgate:—

*Moston Brick & Building Co., Ltd., Moston.

Middlesbrough.—104 houses at Brambles Farm, North Ormesby, for the T.C.:—

Fourteen pairs—
‡R. Blackett & Son ..... *each* £320
Five sets of four—
‡Stephen Coates, Ltd. ..... *each* 317
Seven sets of eight—
‡Stephen Coates, Ltd. ..... *each* 314

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Milford Haven.—Central school for 640 pupils, for the Pembrokeshire E.C. Mr. Owain T. Thomas, L.R.I.B.A., County Architect:—

E. Rich & Son, Swansea £29,022 0
T. Harries & Son, Neyland 27,363 0
E. R. Evans, St. Davids 25,878 10
I. Davies, Bridgend 24,900 0
Bennett Bros., Swansea 24,500 0
R. Jones, Caerphilly 24,227 0
James Bros., Swansea 24,000 0
E. Thomas & Son, Neath 23,520 13
Waring, Cole & Waring, Neath 22,940 0
S. G. Thomas, Pembroke 22,786 14
F. W. Lloyd & Sons, Milford Haven 22,692 17
J. Stephens, Cardiff 22,123 14
J. Morgan, Neath 22,077 15
H. Adams & Son, Milford Haven 21,597 0
*D. Davies & Sons, Cardiff 21,500 0

Newport.—Assembly Hall at the Belle Vue Central school, for the E.C. Borough Architect:—

*J. H. Williams, Kelvedon-street, Newport (Mon) £1,867

Newtownards.—Reconstruction of existing workhouse buildings into district hospital, for the B.G. Messrs. Young & Mackenzie, chartered architects, 143-145, Scottish Provident Building, Belfast:—

*McAuley, McIlroy & Co., Windsor-rd., Belfast £32,416

Normanton.—Installation of low-pressure hot-water central heating system at the Whitwood Mining and Technical Institute, for the West Riding C.C. Mr. H. Wormald, County Architect:—

*R. Wood & Son (Bacup), Ltd., Bacup.

Northampton.—Additions to factory in Barry-road for Messrs. J. Sears & Co. (True-Form Boot Co.), Ltd. Mr. F. H. Allen, A.R.I.B.A., architect, 26, Abington-street:—

*A. P. Hawtin & Sons, Ltd., Northampton.

Northampton.—New pavilions in Victoria-park and Cow Meadow, for the C.B.:—

*Lack & Revitt ..... (Victoria-park) £675
*G. F. Sharman ..... (Cow Meadow) 645

Otley.—Ten more houses at Pool, for the R.D.C.:—

Builder—*J. Newsome Walker, Ltd., Horsforth.
Plumber—*H. & S. Stott, Yeadon.
Plasterer—*J. & M. S. Walsh, Guiseley.
Slater—*J. Shepherd, Otley.
Electrician—*H. Casse, Bradford.

Padiham.—Steel footbridge across the River Calder, for the U.D.C. Surveyor:—

Abutments—*M. & J. W. Heap, Burnley.
Steelwork—T. Blackburn & Sons, Preston.

Portsmouth.—Painting work (internal and external) at the North End tramway depot, for the Corporation. Mr. B. Hall, General Manager and Engineer:—

*Humbys, Ltd., Farlington, Cosham.

Preston.—Construction of the Ribble Viaduct, for the L.M.S. Railway Co.:—

*Sir William Arrol & Co., Ltd., Glasgow £20,000

Rochester.—Branch bank for the Midland Bank, Ltd., in High-street. Mr. G. H. Goldsmith, F.R.I.B.A., architect, 44, Great Russell-street, W.C.1:—

Builders—*G. E. Wallis & Sons, Ltd., Maidstone.
Patent stone—*G. E. Wallis & Sons, Ltd.
Strong-rooms—*Chatwood Safe Co., Ltd., Shrewsbury.
Oak wood floors and interior fittings—*W. Nicholson & Sons, Ltd., Leeds.
Fibrous plaster—*H. H. Martyn & Co., Ltd., Cheltenham.
Electric lighting—*Bective Electrical Co., Ltd., London.
Marble—*Venning & Co., London.

Rotherham.—Sewage disposal works on the Ravenfield Common, sewage pumping station at Silverwood, etc., for the R.D.C. Mr. C. O. Rawstron, engineer and surveyor:—

Harrison & Co., York	£7,960 11	0
(a)	6	8
Johnson & Sons, Ltd., Mirfield	7,382 15	0
(a)	1	9
Edcaster, Ltd., Doncaster	7,115 3	2
Squires & Sons, Ltd., Selby	6,754 4	6
(a)	7	6
R. Snell & Sons, Ltd., Rotherham	6,631 15	0
(a)	2	6
A. J. Pugh, Rawmarsh	6,403 10	0
(a)	3	0
A. C. Treberne, Rotherham	5,933 12	0
(a)	5	0
A. Cooper & Sons, Ltd., Greasbrough	5,757 19	0
(a)	2	6
W. Blair, Rotherham	5,597 6	0
(a)	2	6
Knights, Ltd., Doncaster	5,591 9	5
(a)	1	0
Mollekin Bros., Maltby	5,346 12	6
(a)	1	9
*Beeden, Ltd., Thrybergh	5,233 10	3
(a)	2	6
Swift Bros. & Haslam, Ltd., Doncaster	5,038 9	0
(a)	2	0
Engineer's estimate	5,238 12	4
(a)	2	6

(a) *Per yd. lin. for Rock E.O.*

Romsey.—Constructional works in Station-road, Romsey, for the Corporation. Borough Surveyor :—

G. F. Hurst & Sons, Awbridge £242 0
*L. A. Short, Bishop's Waltham 212 13

St. Ives.—Renewing gutters to thirty houses at Warboys, for the R.D.C. :—

—, Headley £127 10
Allen & Son 117 15
*—, Canham 63 15

Salford.—Bungalows at the Maternity Home and Babies' Hospital, for the T.C. :—

*Fearnley & Sons, Ltd., Salford £748

Scarisbrick. — Reconstruction and widening Hackayne Canal bridge and approaches on the Scarisbrick and Downholland-Maghull-road, A.498, for the Lancashire C.C. Mr. H. Schofield, bridgemaster and surveyor, Council Offices, Preston :—

*Norwest Construction Co., Ltd., Liverpool.

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Settle.—Sewage disposal works at High Bentham for the R.D.C. Mr. F. J. Eodwell, engineer, 37 and 38, Prudential-buildings, Park-road, Leeds :—

*J. G. Pearson, Savile Town, Dewsbury £4,500

Sheffield.—Alterations are to be made at the casual wards at Firvale House, for the Corporation :—

*D. O'Neill & Son, Sheffield £3,770

South Shields.—42 additional Council houses on the Marsden site, for the R.D.C. :—

*W. D. Allison, Whitburn £14,154

Southampton.—Schools on the Deanery site, Marsh-lane, to accommodate 1,280 scholars, for the C.B. Borough Engineer, 33-35, French-street :—

*T. Conway, Ltd., Weymouth £38,777

Stafford.—Steel frame buildings for additional stockrooms and machine shops for the Universal Grinding Wheel Co., Doxey-road :—

Steelwork—*Lysarts & Co., Ltd., Bristol.
Corrugated asbestos—*Bell's Asbestos & Engineering Supply Co., Birmingham.

Stalybridge.—Structural steel frame work at extensions at Hartshead power station, for Stalybridge, Hyde, Mossley and Dukinfield Tramways and Electricity Board Messrs. W. H. George & Sons, architects, 7, Warrington-street, Ashton-under-Lyne :—

Steelwork—*Edward Wood & Co., Ltd., Trafford Park, Manchester.

Stockport.—Bus garage and offices for North Western Road Car Co., Ltd., Charles-st. Messrs. Wrathmell & Blackshaw, LL.R.I.B.A., architects, Queen's-buildings, St. Peter's-square :—

*M. Lane, Ltd., Stockport.

Stockton-on-Tees.—Alterations and additions to St. Paul's Church for the Parochial Council. Mr. H. D. Pritchett, F.R.I.B.A., architect, 12, High-row, Darlington :—

*J. & W. Lowry, Newcastle-on-Tyne.
Electric Light—*H. Sykes & Sons, Darlington.
Heating Installation—*Brightside Foundry & Engineering Co., Ltd., Newcastle.

Stretford.—Additions of practical training rooms at Victoria Park school and addition of one room to Gorse Hill school, for E.C. Mr. P. Howard, A.R.I.B.A., architect, 98, Mosley-st., Manchester :—

*F. C. Moore & Sons, Sale, Cheshire.

Tottenham.—Erection of Clasbury-road (St. Ann's) branch library, for the U.D.C. :—

*R. J. Rowley, Ltd. £2,025

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*M. A. Boswell, School-street, Wolverhampton £89,506 10

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